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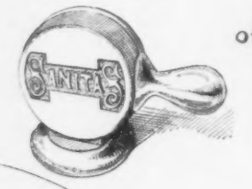

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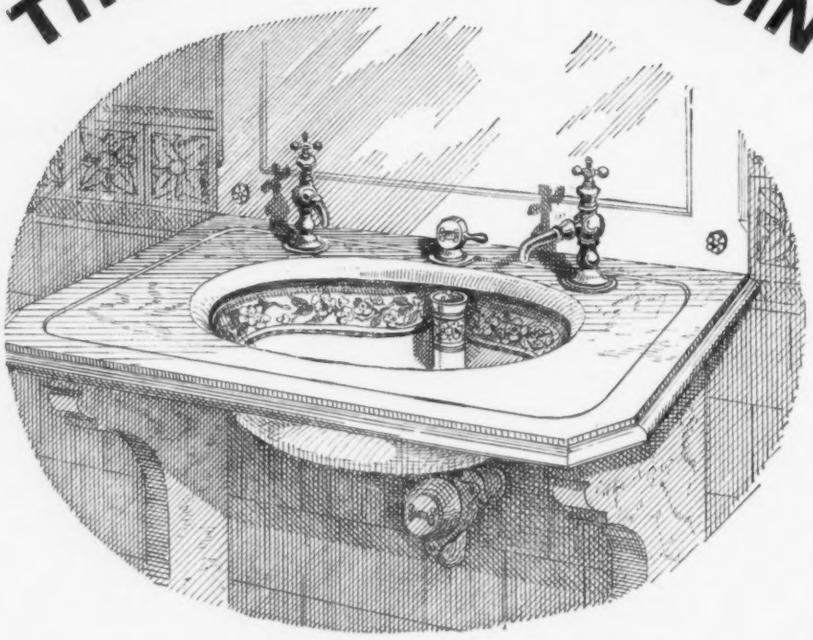

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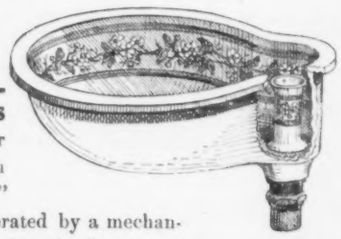

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THE Société Centrale des Architectes de Belgique is one of the most active and energetic bodies in the profession. Whatever it undertakes to do is done thoroughly, as well as with a certain forcibleness which attracts unusual attention. The last subject which it has taken under consideration is that of public competitions, and the results of its deliberations have been collected in a pamphlet, which has been issued for presentation, as the official expression of opinion of the Society, to municipal bodies, directors of hospitals, building committees of churches, and others interested in the matter from the point of view of those outside the profession. The pamphlet consists of two reports drawn up by committees of the Society, one on the utility of competitions in general, and the other on the best method for their organization, which have been adopted by the Society, and, as it is thought, show that a fair competition for public work is favorable to all interests concerned, but that it is of great importance that the competition should be carried out in accordance with the principles approved by the profession. In regard to the utility of such contests, the report calls to mind that they have been in use for many centuries, and cites the examples of the competition for the doors of the Baptistery at Florence, of that for the Cathedral in the same city, of that for the Cloth-Hall at Ypres, etc. In our own time a strong feeling seems to have grown up against them in Belgium, as in our own country, and the report examines in what seems to us a very instructive manner the main arguments against them.

THESE arguments may be divided into two classes, those which appeal to laymen, and those current in the profession. Among the former the most potent is perhaps that which represents the danger of exposing a community to the rashness and inexperience of young men, who, as those who use this argument assert, are the only ones in the profession who take part in competitions. "Architects of recognized position," say the volunteer advisers of the authorities who wish to build, "do not enter such contests. If you have a competition you will only become entangled with people that no one knows anything about, and you would do much better to employ at once old Mr. X., who designed the boiler-house for the State lunatic asylum, and who, having spent forty years at the carpenter's bench, must know everything about architecture." The building committee, or other persons in charge of the matter, reflecting that the competitions which they and their friends have previously managed did not seem to attract the leaders of the profession, fall in with this view, and the responsibility of spending a million or two of public money is entrusted to some pertinacious lobbyist, possessing no real qualifications or professional standing whatever. We know well enough in this country the public buildings designed on this system, either with or without the preliminary farce of a pretended competition, and the Belgian architects seem to have similar examples to point the moral of their report. We content ourselves, when we hear of public buildings which are falling to pieces so rapidly that fences are put around them to prevent people from getting in the way of the fragments, or of State-houses and hospitals which are put in charge of a commission almost as soon as they are finished, to see if they can be so altered as to make them fit for their intended purpose, with ascribing all this miserable inefficiency and stupidity in public work to the influence of democratic institutions, but our Belgian brethren take a more practical view, and attribute most of the evil to the circumstances which have prevented such work from being opened to the coöperation of men of real skill. "If competition for public buildings has been regularly organized," they ask, "would such structures ever have been erected as the City-Hall of Vilvorde, the Court-Houses of Dinant and Tournai, and many others which need not be mentioned?" In point of fact, they go on to say, the idea that architects of experience and reputation will not take part in competitions properly conducted is wholly groundless. In France, where, after a long struggle against the indifference of the public authorities, and the opposition of those interested in the existing state of things, the architects have succeeded in opening important public work on fair terms to the emulation of the profession, not only the most distinguished but the oldest architects participate regularly in them. Among the competitors for the rebuilding of the Hotel-de-Ville in Paris were M. Vaudremer, who was then forty-five years old, and had just completed his famous church of Montrouge; M. Ballu, fifty-six years old, the winner of the competition, who had already built three great churches; M. Baltard, sixty-seven, the architect of the Church of Saint-Augustin and the renowned Halles-Centrales; M. Magne, fifty-one, the architect of the theatre of the Vaudeville, the theatre of Angers, and two large churches, and many others of equal age and reputation. More recent competitions have attracted the best men in an equal degree, and the great public buildings of France, without exception, do honor to the country and the profession.

WITH regard to the effect of competitions properly conducted on the profession, the report speaks earnestly and well. Apart from the reputation to be gained by success in a noted contest, the opportunity of comparing his best work with that of others is something that a true artist, desirous of improving himself, would not willingly forego. A painter or sculptor who refuses to exhibit with others, and shows his pictures or statues by themselves, generally gets the reputation among people of sense of being a charlatan; and architects, perhaps least of all, can afford to neglect the most useful means for correcting their errors and gaining fresh ideas, through the ordeal of well-conducted competition. It is true that much time, money and trouble must be thrown away by the unsuccessful competitors, but this, which is the principal objection to architectural competitions, may be in great part obviated by the double trials which are now becoming common, and indirectly the expenditure is to a certain extent made up by the interest excited among the public by a competition, which is apt to extend from the particular building under consideration to architecture in general, of course with final advantage to those who practice the art with skill. After the competition for the Exchange at Amsterdam, the drawings were exhibited, and more than twenty-five thousand persons came to see them. Two-thirds of the number had probably never seen an architectural drawing before, and the sight of this collection may have formed their entire education in architectural criticism, but it was certainly much better than nothing, and many an architect will owe a client to the impression made by the exhibition.

THE BRITISH ARCHITECT gives a description of the means adopted recently for lowering a bridge without interrupting the traffic over it, which is worth remembering for

future use. The new approach bridge, over the River Irwell, leading to the Exchange Station at Manchester, had been built at such a grade as to make it dangerous to drive over it in some circumstances, and the railway company decided to lower one end of it. The structure was supported by five main box-girders, about one hundred and sixty feet in span, joined together by cross-girders. The distance through which the end was to be lowered was about sixteen inches. Piles were first driven in the river-bed, and under the end of each girder was placed a cast-iron cylinder, eight inches in diameter, and of metal three inches thick, supported by the piles. The bottom of the cylinders was made conical, ending in a short, open tube, through which was inserted, laterally, a steel bar, two inches in diameter, and drilled with a hole, exactly like the plug of an ordinary water-faucet. The cylinders were then filled nearly to the top with dry sand, and oak posts set in, resting on top of the sand, and wedged tightly up to the under side of the girders. When all was ready, the steel plugs were turned, and the sand allowed to flow out. In five minutes the girders had been lowered an inch, and the flow was then stopped, to see if any signs of undue strain appeared in the joints of the bridge. As none were to be seen, the sand was again allowed to run out; and, with frequent stops for new examinations, the operation was continued for five hours, when the bridge had reached its final position, without any interruption to traffic, or any visible strain in any part.

THE *Philadelphia Press* gives the first clear account that we have seen of the remarkable series of strikes and boycotts which have nearly made an end of the business of an unfortunate carpet manufacturer in New York, who has never done anything inconsistent with Union rules, and has obeyed to the best of his ability the orders imposed upon him by various executive committees. It seems that Mr. Higgins's factory employs members of two of the New York District Assemblies of the Knights of Labor. Not long ago it was necessary for him to discharge some of his operatives, and, as it happened, all those selected as being most easily spared belonged to Assembly No. 126. The Executive Committee of this Assembly promptly ordered the factory to be struck until the discharged men were reinstated, and most of the operatives dropped their work accordingly. Those who remained belonged to Assembly No. 49, the Executive Committee of which could not brook any interference with its members from another committee, and, therefore, ordered its own men to remain in their places. Obviously, a factory could not run with only one-tenth of its hands, and as the Executive Committee of "49" threatened to call out its men if any negotiations were entered into with the usurping "126," and "126" refused to listen to any terms so long as the authority of "49" was recognized, Mr. Higgins found himself in a lamentable condition. He finally plucked up courage, and negotiated successfully with "126" for the return of the main body of his men. For a time "49" appeared to acquiesce, but its managers, as it appeared, only nursed their revenge until a favorable opportunity. This soon presented itself. Another strike in Assembly 49 gave a pretext for annoying people by wholesale by calling out its men to "show sympathy," and Mr. Higgins's engineers, who belonged to this Assembly, were ordered out. Mr. Higgins tried to adjust the matter, but was told that he could not have his engineers back until he broke off his agreement with "126." He had already had enough of fighting with "126," and refused; and "126" procured engineers for him who did not belong to Assembly 49, and notified him that if he ever took back the "49" engineers his factory would be struck. The next step of "49" was to induce more carpet-weavers to join its ranks. They were taken in, one by one, and when enough of Mr. Higgins's men had joined to make their loss a serious matter, they were suddenly ordered out. The distracted Mr. Higgins tried to negotiate with both parties, but was not regarded by either of the combatants, and at last "49," overcome by numbers, withdrew from the fight, taking its men with it, and "126" supplied their places. On most battle-fields, after the combatants on one side are all dead, gentle peace reigns for a time; but with the Knights of Labor it is not so. No sooner had "49" abandoned the contest than the General Executive Board of the "Colossal Organization" stepped in, and proceeded to deal smashing blows at "126," using Mr. Higgins as a club. The entire Assembly No. 126, containing thousands of innocent men and women who had never seen a carpet-loom, was expelled from the "Colossal Organization," simply because its Executive Committee had assumed too much authority; and a villainous circular was officially promulgated throughout the country, warning all members of the Knights of Labor not to have anything to do with the Higgins carpets, on the ground that they were "not well made"; the truth being simply that they were made by working men and women whom the tyrants of the order wished to injure, so as to reach over their heads, certain officials who were not servile enough to suit their taste. The selfish and impudent men who push themselves to the front among the Knights of Labor have to answer for many cruel schemes for magnifying their own importance at the expense of the poor and uncomplaining people whom they rule, but no one has been more brutal than this, which is due to the highest authority in the "Colossal Organization." We trust that the courts will take speedy action in regard to the circular, and attach the funds of the Order to repay the losses which Mr. Higgins and his operatives may suffer on account of it. There can be no question of the justice of making the money in the hands of such conspirators liable for the damage which they cause; and a few test cases would make it dangerous business for the Executive Boards to sacrifice truth and decency to their private malice.

A SINGULAR accident took place not long ago in Germany, recalling, in some respects, the fall of the Bussey bridge in Massachusetts. A suspension bridge was built in 1851 across the River Ostravitza, between Ostrau in Moravia, and its suburb, in Silesia. Instead of ropes, the bridge was sustained by four chains, composed of what we should call eye-bars, each link containing six eye-bars, so that each pin-connection passed through twelve eyes. This must have been originally an excellent arrangement, such chains being flexible enough for their purpose, and not liable to some of the obscure defects of ropes, while they would be much more easily inspected than wire cables. In fact, inspection of a certain sort seems to have been regularly given them, and two years ago the municipal officers, who were naturally anxious about the condition of an iron bridge thirty-four years old, ordered a special examination by experts. A month later they received notice that the bridge had been inspected in every part, and had been ascertained to be in good condition, and was entirely safe. Reassured by this "inconceivable report," as *Le Genie Civil* well calls it, the town authorities allowed it to be freely used, and on at least one occasion this spring, there were more than three hundred persons on it at once. A few days later, when two carriages, ten persons, and a file of cavalry soldiers, sixteen in all, were on the bridge, the suspending chains on one side broke, letting the bridge fall, and killing or wounding a large part of the people on it. There is some reason to suppose that, as in the case of the fall of the famous suspension bridge at Angers, the final strain may have been due to the vibration caused by the measured march of the cavalry, but horses do not often keep step with mathematical precision, and the condition of the bridge, as shown after the accident, was quite bad enough to account for the catastrophe independent of vibrations. Instead of the "good condition" in which the "experts" reported that they had found the ironwork, eleven out of the twelve eye-bars composing the broken double chain were found to have lost five-sixths of their substance by rust; the metallic section of each eye-bar remaining being, on an average, one-tenth of an inch thick; while the twelfth member of the group was found, completely rusted, and covered with dust, in the spot where it had lodged when it dropped, long before, from its place. Of course, a wrought-iron structure, even if originally designed with a factor of safety much larger than usual, would be in imminent danger of falling by its own weight when rust had consumed more than five-sixths of its substance, and a simple calculation showed that the strain on the sound metal at the time of the fall was more than the breaking-strain of good wrought-iron; so that the real wonder is that the bridge stayed up so long. The most serious corrosion, strange to say, was found to be under cover, where the chains were anchored on the land side in a chamber of masonry under the parapet; but it seems that foul water from the street had penetrated into this chamber, and the oxidation of the ammonical fumes may have produced acids which would act very powerfully on iron.

BUILDING ACCIDENTS.—I.

TALL CHIMNEY-SHAFT ACCIDENTS.

ACCIDENTS to tall chimney-shafts, even when unaccompanied by loss of life, must always be a source of much trouble, loss of business, and great inconvenience; and any one interested in chimney construction will naturally be led to inquire into their cause and prevention. When accompanied by loss of life it becomes imperative that the subject should receive most serious consideration.

With the foregoing in view and believing that more can often be learned from failures than successes the authors have, for many years taken notes respecting, and inquired into accidents of all descriptions in connection with tall chimney-shafts.

Accidents have arisen from the following causes:

1. Bad foundations.
2. Improper designs, and indifferent materials and workmanship.
3. Wind-pressure.
4. Lightning.
5. Large overhanging caps.
6. Oscillations.

In some cases two or more of these causes have combined to overthrow the structure. There are also

7. Accidents to "steeple-jacks" and workmen.

It will be seen, from the information obtained after the accidents, in many instances the shafts were built without the careful consideration and special knowledge which are necessary in designing such structures, and it cannot be too widely known that shafts are not ordinary erections, the failure of which will necessitate *only* a rebuilding. Unstable shafts are impending dangers, and may be imminent death to many. In some cases given it will be noted that the owners or proprietors have considered themselves fully capable of designing tall shafts and have only called in an architect or engineer at the last hour, when they lost all confidence in their own ability, and the defective structure was nearly completed.

I. BAD FOUNDATIONS.

The first instance the authors intend giving, being probably the worst of its kind known, forms almost a typical chimney, so far as being an example of the dangers of bad foundation and improper design.

The Newlands Mill chimney, Bradford, built 1862–3, fell down December 28, 1882, killing fifty-four persons and destroying property valued at £20,000. The proprietors also had to pay damages amounting to £2,500 to the sufferers through this disaster.

The proprietors of the mill in 1862, being desirous of erecting a chimney, requested a builder to give a tender. There were no plans or specifications prepared, but reference was made to other chimneys built for the same proprietor. The following formed the basis of the tender: Chimney to be two hundred and forty feet high from ground-line, with octagonal exterior faced with stone and ornamented by panelling; to have circular flue nine feet diameter, base twenty-four feet square, with two courses of footings twelve inches thick, the first twenty-eight feet, the second twenty-four feet square; to rest on a bed of good concrete thirty-two-and-a-half feet square by two-and-a-half feet thick. The foundation for this chimney was prepared by the proprietors, and was on the site of an old coal-shaft; t is was partly filled up with lime-concrete, forming a central pillar eight-and-one-half feet diameter, and around were constructed four other shafts, each six feet in diameter, also of concrete, the old surroundings being care ully packed with stones and oak wedges.

The chimney which was built with stone facings outside, brick lining inside, and backing in between the two, was commenced in July, 1862, and continued until the middle of December; the building was then suspended, being over one hundred and twenty feet high. The work recommenced February 28, 1863. Through-stones were built in about every three feet in circumference and about two-and-one-quarter feet apart vertically. The erection was continued to the 7th June, the chimney having reached two hundred and ten feet high.

On the evening of June 7th the chimney was left plumb. On the following day, the 8th, it was found to be bulged on one side and hollow on the other. About fifty-four feet from the ground-line a course of stones was cut out on the side opposite to the canting over, and the space was filled up with stones one-half inch less in thickness. This operation was continued nearly half-way round, iron wedges being used on top of the thinner stones to support the masonry. Upon withdrawing these iron wedges the workmen could hear the through-stones break. The first cut did not have the desired effect, and a second was made about two feet above the first, with the same results as to breaking the "throughs." The shaft was after this declared to be perpendicular.

Three years after completion the chimney was found to be cracked and broken on the side opposite to the cuts. This was repaired. About 1872, further cracks were noticed and likewise repaired.

In October, 1882, the tenants of the mill became uneasy, further indications of cracking having appeared, which, in December, developed into bulges. Upon examination it was decided to take out the bulges and repair the outer casing, it being the general opinion the latter was alone at fault. Difficulty was experienced in this, and the attempt to rectify the bulge failed.

On the 26th of December small portions of the outer casing fell, and on the 27th a large piece fell, breaking down the scaffold used for repairs. On the night of the 27th the wind blew half a gale, or about sixteen pounds per foot superficial. On the following morning, December 28, more of the outer casing fell, and at a few minutes past eight o'clock, A. M., the chimney began to settle, bursting out stones and lime where the shaft had been cut. This continued for a few seconds, then the upper portions of the chimney fell in a south-east direction, with the fatal results as stated at the commencement of this description.

From the foregoing account it is evident the chimney was badly designed, as well as built on a faulty foundation. The site selected, an old coal-pit shaft, surrounded by old workings was almost the worst one can conceive, and as to care being taken to pack them with stones and oak wedges, no amount of care could make such old workings solid. The structure was not homogeneous, nor could the introduction of "through" stones, one to the yard, make it so. Common brick being used inside, good ashlar wall-stones outside, the space within filled with backing, good screened lime used for the inside lining and outside facing, unscreened lime used for the backing, constituted three different materials of varying crushing strengths, and the whole history of this ill-fated structure constitutes a chapter of warnings in the annals of chimney-building.

An ingenious devi e for building a chimney-shaft for the Truro Gas Works, Cornwall, on a faulty foundation, was given in a paper read before the Architectural Association, England, in 1886. The site was not far from the banks of an estuary, and the foundation-bed unequal and uncertain. The chimney had been twice built and twice it had failed. The builder then made himself responsible for its secure erection; he judged that if it must sink at all it ought to be made, or, at all events allowed to sink equally; he therefore had a large block of granite of several tons weight roughly shaped into a pyramidal form. First of all, this block was embedded point downwards, and on its upturned base was gathered-out the walling to the extent required. The shaft was built on this foundation, and although it subsided eighteen inches it sank so regularly that it kept its erect position as nearly as possible.

Bingley, near Bradford. This chimney, which was built at a cost of £2,000, was found, a few years since, to be four feet six inches out of perpendicular. The inclination was due to the foundations having settled on one side. Some local people were consulted and advised that excavations should be made under the foundations at the opposite side, until the chimney settled there to the same extent, and so brought itself back to the perpendicular. A well was actually dug beneath the higher side of the shaft and supplied with water to favor the yielding of the rigid part of the foundation. It fortunately happened before the water had time to accomplish its dangerous work, a London firm was called in to advise, who promptly filled in the well that had been excavated with brickwork and concrete. The bottom of the shaft was then cut half through, on the side where no settlement had taken place, by removing three courses of the brickwork. As these courses were cut away strong iron jack-screws were inserted to sustain the unsupported mass of brickwork. The jacks were put in one after the other, a few inches apart, as the brickwork was cut out, and each one was adjusted by its regulating screw. When the entire gap had been formed, the jacks were slowly and gradually shortened. When the shaft had very nearly settled back into its original vertical position the portions which lay between the jacks were filled in with solid masonry, the jacks were then one after the other removed, and masonry also put in their places. The work was thus successfully accomplished, and the chimney now stands upright.

Berle Chemical Works, East Jarrow. In February, 1875, during a strong gale, a large chimney connected with these works was blown down. Three men wore at work eighty yards from the shaft; one was killed on the spot; a second died afterwards, and the third man was slightly injured. The chimney fell on a building, doing damage to the amount of £3,000. The jury, in their verdict upon the death of the two men, expressed an opinion that the accident was due to the defective and insufficient foundation on which the shaft was built.

II. IMPROPER DESIGN, INDIFFERENT MATERIALS AND WORKMANSHIP.

Collapse of a Chimney-shaft at the Elton Vale Bleach-Works, Bury, Lancashire.—On Wednesday, January 23, 1884, about one P. M., during a strong gale of wind, the top portion of chimney-shaft fell onto the roof, wrecked the building, and killed three of the workwomen.

The shaft must have been erected many years, as the proverbial "oldest inhabitant" could not remember it being built, but the following particulars were given at the inquest. The original height was ninety feet by seven feet two inches square outside, and three

feet four inches inside at base, the top was nine-inch brickwork, and the outlet one foot eight inches. In June, 1870, it was partly pulled down and rebuilt to a height of one hundred and five feet, and the opening at top made larger by building to a less batter, so as to provide a better draught to boiler fires for increased steam power. No architect was employed. In December, 1882, an iron belt was put round the top because the blocking-course had cracked, also the shaft being out of perpendicular and leaning over the building, it was straightened by taking out bricks from one side, and replacing them by thinner ones. The work was done in frosty weather, and after pointing up a crack ∠ irons were fixed at the corners, and five wrought-iron bands were put round the shaft. The "steeple-jack" who did the work told the proprietor it would stand, as he had done all he could to it. In answer to a juryman, this workman said, "Christmas was a good time to mend chimneys as the frost did not get into the mortar because the chimneys were always warm!"

An architect called in after the accident to report on the case for the guidance of the jurymen stated that the walls of the shaft were said to be built of nine-inch brickwork with nine-inch stonework outside, and little attempt was made to obtain a proper bond. The base was quite inadequate to the height of the shaft: he would have built it ten feet at base with a two-foot batter. Increasing the height was the primary cause of the accident. The pointing in the stonework showed there had been considerable expansion on account of intense heat, yet the inside brickwork was not calcined or damaged, and probably had been at some recent period renewed.

The cause of this accident can be summed up in a few lines. Fifteen feet were added to a shaft built of brick and stone imperfectly bonded and without due consideration of the sufficiency of the base. In this condition it stood upwards of twelve years, and gave warning of the coming collapse by leaning over the building. It was brought back to the perpendicular by reducing the thickness of one course of brickwork, ∠-irons being fixed at the corners and bound round with iron hoops. In this crippled condition it stood two years, but overweighted, imperfectly bonded, and with insufficiency of base, it was at the mercy of the wind, which finally caused its destruction.

It may be noted that a contract had been signed for building a new shaft about eighty yards from the old one on the very day the accident occurred.

At the Liverpool summer assizes an action for damages was brought against the proprietor of the works, by the father of one of the victims. A "steeple-jack" gave evidence for plaintiff, and stated that although it was a common occurrence to straighten chimney-shafts as this had been, yet in his opinion they were always weakened thereby. For the defence the main contention was that the fall of the shaft was solely attributable to the extraordinary gale experienced on the day of the accident. The jury found for the plaintiff, damages £40.

Fall of a Mill Chimney at Dye Works, Windhill, Shipley; eighty-seven feet high, seven and one-half feet square at base.— In 1882 this shaft was thought to be in an unsafe condition, and the Local Board had it examined; it was then reported to be quite safe. The shaft had, for some time, been out of plumb, and a fortnight before the accident, owing to complaints as to its dangerous condition, an architect examined the chimney and reported to the Local Board that it ought to be taken down.

The main portion of the shaft fell on the 27th of July, 1885, across the engine-house and a part of the works, destroying buildings and machinery used in dyeing, etc., and doing damage to the extent of £600. Eye-witnesses stated it fell in one mass and only broke when it came into contact with the buildings.

Fortunately, at the time of the accident the workpeople were having a holiday; or serious loss of life would have resulted.

In this case ample warning had evidently been given by the structure itself as to its unsound condition, and these indications should not have remained unheeded for three years until the chimney fell.

Fall of a Cavity Chimney in Oldham; one Man Killed.— This accident occurred in May, 1873, at the Osborn Mills of Featherstall Road. The shaft was one hundred and sixty-five feet high, sixteen feet in diameter at base, and seven and one-half feet at top, and leaned over considerably on one side. The owners entered into a contract with two brothers, who were chimney-builders, to "saw" the chimney. Observing that instead of sawing out some of the mortar-joints they removed a course of brickwork at about one-third of the height from ground-line on the higher side, and put in place thereof wedges of iron and wood; the owners remonstrated with them. One of the brothers at the bottom of the shaft assured them that taking out a course of bricks was as safe as sawing the mortar-joints, and took one of the owners to some rising ground to observe the safety, when, as if in ridicule of his assertion, the chimney toppled over bodily, except about thirty feet at the base, and the man at work on the scaffold was buried in the ruins.

An experienced builder, at the inquest, stated he was of opinion the chimney was built in a faulty manner. The materials were inferior, many of the bricks being soft, and the mortar improperly mixed, consisting too largely of sand. The fall of the chimney he attributed solely to the conduct of the men themselves in cutting so large an aperture through the brickwork and needlessly removing a course of bricks.

In straightening chimney-shafts, recourse has often been had to the removal of a course of brickwork for half the diameter and the insertion of thinner bricks, and the straightening has been successful, but such an operation requires caution, and the thinner bricks should be built in as the larger ones are removed, the original thickness being made up with iron wedges to be gradually withdrawn. These precautions were not, however, taken in this case, and one man paid the penalty with his life.

R. M. and F. J. Bancroft.

[To be continued.]

PICTURES OF THE SEASON IN NEW YORK.[1]—IV.

A Characteristic Himalayan Bridge
after Sketch by Wm. Simpson

TWO more large general exhibitions of American works have been opened since the opening of the Academy. The Metropolitan Museum has shown its newly-acquired treasures; and minor collections and sales have been so numerous that it was hard to see them all, and still harder now to remember them.

Mr. Vedder exhibited a roomful of pictures and drawings, the latter including the full series of designs published last winter as illustrations to Omar Kayyám's verses. These appeared to better advantage, of course, than in the reproductions, but neither in them nor in the paintings did it seem to me that true imaginative strength or a really-accomplished kind of technique was revealed. And the color in some of the paintings was rather harsh and crude, though in others — notably in certain Italian landscapes — it was agreeably harmonious. In short, it was proved once more that Mr. Vedder's chief talent lies in the mastery of decorative effects of line. Sometimes these effects are so used as to produce a strongly-impressive pictorial result, as, for instance, in the picture of the "Fates" (which is an enlargement of one of the Kayyám designs) where his beautiful swirls and spirals are well in place as composing the fabric which the sisters are weaving. But in the rendering of deeper dramatic intentions through attitude and facial expression Mr. Vedder is not always successful; and though the dignity and seriousness of his work are always delightful, one is often distressed by his lack of power fully to reveal the intention one feels must have lain behind his result.

At the public sale of the artistic effects of the late Asher B. Durand — the Nestor of American painting and engraving — some eighty pictures and studies sold for about $9,000. (Since Mr. Durand's death, but one survivor remains of the original founders of the Academy of Design). A large collection of American pictures by different artists was also sold not long ago, attracted much attention from the public, and brought very fair prices. Thirty-thousand dollars' worth of pictures were sold at the Academy exhibition; and the new Museum collection also helps to prove the increase of our interest in native products.

When this collection was actually seen, it was found to contain a much greater number of recent acquisitions than had been described in advance. Not only the "Horse Fair" represented the Stewart collection, but also Meissonier's large "1807," given by Judge Hilton, and Piloty's "Thusnelda," presented by Mr. Hilton, Jr. A fine large Détaille, the "Battle of Champigny," had also been given by Judge Hilton, after having for a number of years formed part of his own collection, and Mr. Seney had added eight pictures to the ten he had recently presented. Many of his gifts are American works, and one of them is Carl Marr's quite delightful "Gossips," and two others, the late Mr. Fuller's "Nydia" and "And She was a Witch." Mr. Schaus sent Lhermitte's large "Vintage," and altogether the gifts of this one year, without including the Wolfe pictures, have made the Museum's collection a truly interesting and valuable one, as regards both American and foreign pictures. Infinite gratitude is due to those public-spirited citizens who have worked towards this result, and many congratulations upon the good sense and the good taste which, in almost every case, have inspired their selection of gifts.

The most conspicuous recent sales of foreign pictures have been those of the collection of Mr. Probasco of Cincinnati and of a motley assortment of French pictures — most of them good ones — brought over by M. Durand-Ruel. Even the Impressionist pictures in the last-named collection found ready purchasers though not at very high prices. The Probasco pictures as a whole were not so good as rumor

[1] Continued from page 196, No. 591.

had led us to expect, including a large percentage of dismal Düsseldorf products. But they also included certain very fine examples of the great French landscape painters, a beautiful Couture, and a charming large picture by Isabey, a painter rarely represented in American galleries. This was called, if I remember, "Love's Messengers," and showed three young women in a wood reading a letter brought by some cupids who hovered above them. It was a curious intermixture of fantasy and reality but a most delightful one, and as far as color and handling went an extremely individual as well as charming piece of work.

The four prizes at the Academy went this year to admirable pictures—to Mr. Dewing's "Days," Mr. Kappes's "Buckwheat Cakes," Mr. Palmer's winter landscape, and a landscape by Mr. Tryon. The prize open to women painters only was secured by a creditable figure called "Lenten Lilies," by Mrs. Richardson. Mr. Kappes, however, was over the required age and so returned his prize-money which will go to swell next year's amount.

The most interesting, as a whole, of the three spring exhibitions has been that of the Society of American Artists, which was held in the new and pleasant Yandell Gallery on the corner of Fifth Avenue and Nineteenth Street. It contained but one hundred and forty-eight pictures and statues, but among these were many of great excellence and very few that did not have at least the quality of interest. Commonplaceness were almost entirely excluded, and though certain examples were studies or sketches rather than pictures, and certain others were eccentric rather than original, and a few were stronger in intentions than in results, the general impression left by the collection was that our younger men are an extremely clever band of painters and that many of them are true, conscientious and able artists too. The portraits claimed, perhaps, one's first attention. Mr. LaFarge sent a beautiful study of a woman reading — painted many years ago, but none the less welcome on that account; Mr. Eaton, a beautiful, dignified, admirably posed, colored and handled portrait of Mrs. R. W. Gilder; and Mr. Dewing a small half-length of Mrs. Stanford White that was a veritable gem in feeling and in treatment and was appropriately set in a wide lace-like frame whose exquisite design clearly revealed Mr. White's own touch. Mr. Bunker's large portrait of a lady had no decorative charm but was a thoroughly successful essay of that deeper sort which aims at interpreting the sitter's inner nature as well as her mere superficial aspect. Mr. Chase's large full-length of a lady in walking dress, on the other hand, was an impression merely — a glimpse of a woman rather than a portrait, but a most vivid and vital and cleverly-treated one. His portrait of his sister — a child in a white dress — was more "serious" and was delightful in color, in sentiment and in drawing. Mr. Brandegee, Mr. Cox, Mr. Eakins, Mr. Rice, Mr. Tarbell and M. Rajon also sent excellent portraits, the last-named being in pastel. And Mr. Alden Weir's name may close my incomplete list. The girl's head he contributed showed even more than his usual strength, individuality and charm of sentiment, and all the beauty which his method has when at its very best.

Figure-subjects were not very numerous but some of them were extremely good. Mr. Wyatt Eaton sent a delicious little nude figure, and Mr. Thayer a life-size one that was interesting, decorative and in parts beautifully painted. Mr. LaFarge exhibited a little picture of the Lady of Shallot floating down the river in her boat — full of tender sentiment but tainted by no touch of sentimentality, and, of course, a jewel for rich and lovely color. Mr. Dewing's "Tobit and the Angel" had an element of strangeness which to many eyes made it seem a little fantastic; but it was extraordinarily unconventional, dignified and impressive in composition, and, to my mind, sincere as well as individual in feeling. Mr. Brush's "Aztec Sculptor" was an agreeable and accomplished piece of work, very good in color. And Mr. William S. Allen's "Five O'Clock" was a small "impressionist" picture of extraordinary quality — marvelously harmonious in tone yet rich and strong in color, and singularly truthful in atmosphere and perspective. It was a triumph in its way, but the way was one which the trained eye of an artist was quicker to appreciate than the hasty glance of the average visitor. The best still-life paintings in the room were Mr. Carlsen's — things so good in color and so extremely good in technique that one doubly regretted the lack of that skill in composition which was needed to make them thoroughly successful as pictures properly so called. The "Roses" of Mr. Thayer and the "Azaleas" of Miss Hecker seemed to me the best flower-paintings, excepting, of course, Mr. LaFarge's incomparable "Water-Lilies."

Landscapes were numerous and many of them very individual as well as good. Mr. Ryder's singularly poetical and variable talent was shown at its very best in his "Moonlight." The advance which Mr. Dewey has made of recent years was shown in his very successful "Lowlands" — which, by the way, was the landscape chosen by the Committee on Admissions to receive the newly-founded annual Webb prize. Mr. Allen, Mr. Cox, Mr. Carlsen, Mr. Chase, Mr. Coffin, Mr. Davis, Mr. Harry Eaton, Mr. Evans, Mr. Fowler, Mr. Minor, Mr. Teggin and Mr. Tryon — these are but some among the names which deserve citation. But I can speak in detail of only two or three additional works of exceptional interest. One of them was Mr. Ochtman's brilliant yet harmonious autumn landscape; two others were admirable impressionistic studies by Mr. Twachtman — who, one will remember, was an impressionist in Munich and America long before the Frenchmen made the term familiar; still another was Mr. Homer Martin's large and poetical "Lake Ontario"; and perhaps the most remarkable of them all was Mr. Walter Palmer's "Early Snow." I have already spoken of Mr. Palmer's winter landscape which took one of the Academy prizes; but this seemed to me even more individual and even better. Showing the margin of a river overhung by a high bank with thinly-planted pines and a far-off view of the opposite thickly-wooded bank — the distance in full sunlight and the foreground in flickering sun and shadow — it was a marvellous transcript of reality and yet a very artistic work of art. If it had a fault it was lack of any especial beauty in composition, the scene being such as one might see on any shore, not such as any artist would naturally have been impelled to paint for any peculiar felicity of line. But this fault — which to a thorough-going realist would probably seem itself a virtue — was atoned for a hundredfold by the brilliancy and truth with which light, color and atmosphere had been rendered. Only the French Impressionists, it seemed to me, had secured so strong, faithful and resplendent a result; and this work was better than theirs for it had the qualities which almost all their work lacks — reticence of manner, charm as distinct from strength of treatment, and truth to detail (comparatively speaking) as well as to the broadest general facts. One wondered last year whether the same things that the Impressionists had done with no detail and a very disagreeable sort of technique could ever be done with more detail and with a manner of painting which should be pleasant to look upon. In this picture we seemed to find the answer.

And I may anticipate my report of the current Prize-Fund exhibition in so far as to say that there again Mr. Palmer shows us a similar success in a small picture of a forest glade, thinly planted with young trees, through which the sunlight falls on snow. Simpler than either of the others in theme, this picture is perhaps still more remarkable in its rendering of the chosen effect. I am not in the least afraid to say that it is the most absolutely truthful, the most vivid, striking and wholly realistic painting of sun on snow I have ever seen from any hand, ancient or modern; and yet it has no eccentricity of manner, no lack of charm, no sign of striving for mere effectiveness, no exaggeration of one quality at the expense of others. It is so simple that it looks as though any one might do it, yet the longer one looks at it the more one realizes that no one has ever done anything like it before. The Frenchmen, I repeat, are often as brilliant and true, but, so far as I know their work, not one of them has yet got brilliancy and truth with so artistic a reticence of mood and so artistic a charm and completeness of manner. As Mr. Palmer had already painted for many years but never before had painted like this, he was doubtless helped towards his new path by the influence of last year's Impressionist exhibition. But even if this be true there is no reason why the adjective "original" should be denied to his results. Surely it is true originality to learn a lesson from some one else and then put its teachings into still more perfect shape.

Only $4,000 were subscribed to the Prize Fund of this year for the exhibition annually held under the management of the American Art Association. Therefore only two prizes could be awarded — that is to say only two pictures could be purchased for public institutions — as against four last season, and therefore one doubly regrets that these two should not have been more wisely bestowed by the anonymous and somewhat mysterious committee on awards. They went to two landscapes — a good one by Mr. Gay and a poor and rather meretriciously-pretty one by Mr. Davis who has exhibited far better works during the past year. Several landscapes hang on the walls which I think "a good judge" would prefer to either of them, and several figure compositions also. And at least one large still-life — by Mr. Alden Weir — infinitely better deserved selection. Of Mr. Palmer's landscape I have already spoken; but of the others which were good I have no space to speak since more figure-paintings claim attention in this exhibition than was the case with either of the others.

Prominent among them is a vigorous and vivid canvas with many figures by Mr. Robert Blum called "Venetian Lace Makers." It is not very often we see so animated a scene so vivaciously transferred to canvas; and the work is far more serious in quality than is always the case where vivacity is the first thing to strike the eye. The color is strong, yet sober, and the difficult illumination well managed; and each of the figures is as thoroughly well individualized as though it had been an isolated portrait, yet each keeps its place and none is so emphasized as to hurt the unity of the composition as a whole. For once we feel as though Mr. Blum had done his talent full justice; — sometimes in the past he has been so facile and brilliant as to indicate rather than convincingly prove his possession of really sturdy artistic qualities.

Mr. Ulrich's "Artist" is an interesting work though at once less ambitious and less thoroughly successful, it seemed to me, than his essays of the past year or two. Mr. Albert Ryder's "Shepherdess" (which perhaps I ought to have classed among the landscapes) is enchanting; but his "Flying Dutchman" is so fantastic that it will hardly be valued except by those who can dispense with form almost altogether if they are given a rich and singular chord of color. Mr. Rosenberg's row of old women in church is an admirable piece of work, simply "an academy" as far as idea and composition are concerned but better than the average "academy" in its expression of individual character. Near it hangs a large picture of French washerwomen, at their work, by Miss Amanda Brewster, which, when known as the work of a very young artist who has but recently turned from

landscape to figure-painting, produces a very strong and promising impression. Certainly it is not "an academy" or the product of anything but honest, individual observation of nature. Two or three of the figures are most admirably life-like and none fall far below the level of the best. The color, in which blues predominate, is strong yet harmonious: the background — a glimpse of a village street — is charmingly treated; and all the picture lacks to make it thoroughly successful is a more dominant centre of interest than it possesses. Composition in the sense of grace and harmony of line is a virtue for which the modern schools care far too little. But even if it may be left out of an artist's calculations, composition in the sense of concentration of interest — the selection and emphasis of one figure or motive of some sort which shall be the key-note of the whole, the dominant upon which all else depends and towards which all else leads up — composition in this sense, no one can afford to neglect if the making of a *true picture* be his aim. But it seems unfair to criticise anything in a work like this — so youthful yet so full of the prime virtues of sincerity, earnestness and technical intelligence. When a young student who two or three years ago painted nothing but little golden-hued bits of landscape suddenly appears with a picture of this sort and this quality, we feel that there is surely a future in store for her.

Mr. Millet sends two compositions with small figures, one of which — "A Difficult Duet" — is very charming in motive and very accomplished in treatment, but neither of them, I think, equals his "Cozy Corner" of last season — now, fortunately, among the Museum's new treasures. Mr. Childe Hassam is no longer true to Boston streets but is still true to his love for streets in general; and his Parisian views have all the grace of his earlier essays with a great increase of force, coloristic variety and dramatic feeling. The monotony of his former work has disappeared but he has not lost the peculiar individuality which then seemed to be bound up with it. Mr. Denman's "In Blossom Time" is a "decorative" picture with two girls' figures and a great mass of azalea blossoms. The scale is very light but the color very charming; and had both figures been as well posed and characterized as is the one sitting on the floor, it would have been a singularly successful work in its own pleasing though not very profound way. Mr. Creifeld's picture of three sailors, called "An Idle Hour," deserves attention as do also Mr. Alexander's "Chestnuts" — the figure of an old negro, and Mr. Carlsen's large impressionistic study of pink peonies. And Mr. Dodge's "Death of Minnehaha" should be commended as an attempt at once very ambitious and very serious, and as, if nothing more, a good "academy" which is both fresh in theme and dignified in treatment and in which certain textures are extremely well expressed. If, as I am told, this artist is also very young, he may certainly be congratulated upon a promising *début*.

And finally it is a pleasure to say that among the more or less excellent pieces of sculpture in the exhibition there is one at least which it is rather an under than an overstatement to call extremely fine. It is but a little thing — a charmingly-designed miniature bronze pedestal upon which stands a bronze figure not more, I should say, than twelve inches high. It is by Mr. Donohoe, whose successful large figure of the youthful Sophocles I described when speaking of the Academy exhibition; and it, too, represents an adolescent form — the boy Hannibal taking his famous oath of hostility to Rome. The figure is very simply posed at rest, the right hand hanging by the side and holding the scarcely-extended sword. The whole right side is nude, a cloak hanging over the left shoulder and shrouding something less than half the form. No composition could be more simple, yet even in this small size it has a quite heroic force and dignity and impressiveness. And the serious, proud, beautiful little head which crowns it could not be more noble in air or more vital in expression were it increased to larger than life-size. I profess myself no judge of sculpture and am not well enough acquainted with modern products to say whether such a result as this is so phenomenal as it seems to my eyes. But I think that even an ignorant commentator may venture to say that it is the easiest thing in the world to make a big statue look petty, the hardest to make a tiny statue look large; and that even an ignorant eye may be sure it has found excellence when so tiny a statue as this seems so large, so noble, so thoroughly statuesque that no one with the least sense of fitness would like to call it "a statuette"; and of having found beauty when it sees such repose and resistance combined with so much vigor, vitality and individuality. Mr. Richardson was fond of trying to explain the difference between a "little big thing" in art and a "big little thing." This young Hannibal certainly deserves the latter phrase and its beauty seems to me on a par with its real — not its mathematical — size. Had its exhibitors done it justice they would have thought no pains too great to give it prominence and due relief. But, unfortunately, it has been placed on top of a high glass case filled with bric-à-brac where I fear many eyes will pass it by unseen. And had the prize-givers been as wise as they were doubtless conscientious I am inclined to think it would have gone to the Metropolitan Museum or the Union League Club in place of one of the paintings they preferred to it.

A collection of French pictures, imported in bond "for exhibition only" has recently been placed on view at the Academy, filling all its rooms. It is a singular collection, containing many good pictures of many dates and schools, but also many poor ones of the sort we fondly think have "gone out of fashion." And not the least singular thing about it is why it was imported — since it is difficult to credit a dealer with disinterested educational aims upon a foreign land, especially when his importation is of such a sort as to prove that if such aims exist they must be of a very vaguely Catholic sort. But, for whatever reason they may have been brought, there are some among these pictures we are very glad to see. Impressionist examples are numerous and some of them very interesting though but in rare cases as interesting as even the average at the large Impressionist exhibition of last year. The great landscapists are represented chiefly by Rousseau — in two large and very singular examples — and by Dupré, one of whose canvases is of the very best sort which even he ever produced — a moonlight sea-piece of truly marvellous charm. There are several small Henners, good but not especially good, and the large "Eglogue" with two life-size nymphs one of whom is piping to the other. Even those who like Lefebvre's kind of art will hardly be charmed with his big group called "Diana surprised" though I believe it is one of his most "famous" products. There is also a small figure by Meissonier; some excellent works by Gaillard; an interesting large picture called "The Death of a Bull" by Falguière, the sculptor; an admirable landscape with large figures of a peasant woman by Billet; a delightfully simple and fresh pastel of two children with a cat, by Bartholomé, and a long array of works good, indifferent, and bad which when they do not delight us at least serve the purpose of introducing untravelled eyes to many names that have become more or less familiar in print.

But the chief features of the exhibition, not excepting its Impressionist elements, are the two Delacroixs and the ten canvases by Puvis de Chavannes. One of the former is a very beautiful, comparatively small work with many figures, showing a mediæval interior and some sort of a judgment-scene, the meaning of which is not made particularly clear by the catalogue title, "The Honorable Amend." The other is the large "Death of Sardanapalus" which belongs, I believe, to an English collector. The huge canvas with its innumerable life-size figures — Sardanapalus on his couch and his women being murdered all about him, while a circle of fiery smoke fills the distance — does not show the great master at his best, revealing all his weakness as a draughtsman but by no means all his strength as a colorist. But it is an interesting thing to have seen and an impressive thing when we pause to think how few men there have been since Rubens who would have dared even to attempt such a task, much more who could have executed it with such force and fire and riotous audacity. To-day when it is permitted to any one who can to be audacious in any way he chooses, it is a startling and exciting thing to see; but when it was painted, in the early days of romantic protest against classic restraint and formalism, it is small wonder that its author seemed almost more than mortal to his admirers. And since that day there has certainly been no one but Regnault who could have come within measurable distance of this mighty piece of work whose mighty faults seem scarcely more than a necessary part of its exhuberant audaciousness.

Those who admire Puvis de Chavannes admire no one more; but I think they do not often try the experiment of persuading into admiration those whose liking has not come of itself. An art so individual as his, and the individuality of which lies so largely in its abstractness, in its conventions (which is by no means an exchangable term with *conventionality*) alike of form and of color, cannot be explained to those who do not understand it, and cannot be praised in such a way that those who dislike it will be converted. Nor do I think that the pictures in this exhibition will produce as good an impression upon unaccustomed eyes as we who admire and love the artist would wish. Before all else his work is monumental in conception and in execution, and monumental art is never faithfully and fully translated in small replicas. Most of these pictures are such replicas — or, I should say, are the studies for works afterwards executed in large. And the very qualities which make the large results so admirable are those which it is difficult to appreciate in the small. The vast Panthèon decoration showing the life-scenes of St. Geneviève is too famous and too familiar to travelled eyes to need my praise. But seen here on a canvas but some ten or twelve feet long, it will give no adequate account of itself. The extreme abstractness of its design and simplicity and pallor of its color, which fit it so wonderfully well for its rôle as a piece of architectural decoration, become thin and tame and almost puerile here, except to well-trained eyes. I think no one would speak of affectation and stimulated *naïveté* in presence of the Panthèon picture, which makes all its neighbors seem exaggerated or out of place, so beautifully and adequately yet modestly does it play its architectural rôle; yet I find these words in certain criticizing mouths here in New York and can understand to some degree what prompts them. The only picture by the master which really does him justice in this exhibition is the famous "Poor Fisherman" — though even this, I think, is not the largest version Puvis de Chavannes has painted of the subject. Its extraordinary simplicity alike of mood and manner, the marvellous beauty drawn from the actual hideousness of the chief figure, the archaic repose and grandeur and yet tenderness of the whole composition, and the exquisite serenity of the wide monotonous stretch of land and water, work together to produce an impression such as one might think no product of our sophisticated time could give. If for the sake of this picture only we may be very glad indeed of the advent of this curious collection.

M. G. van Rensselaer.

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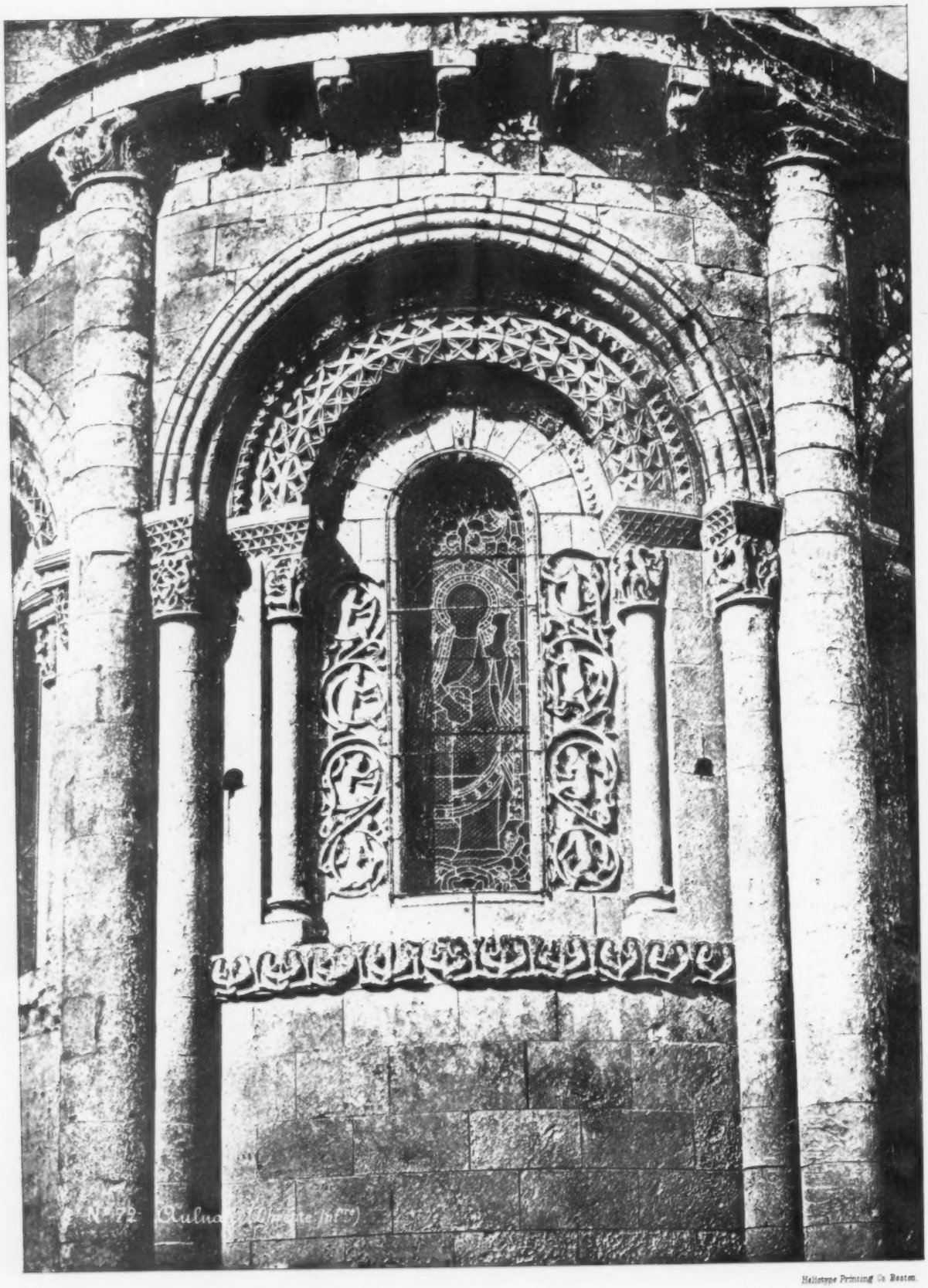

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An Apsidal Window, Aulnay, France.

* Preliminary Sketch for a Suburban * Episcopal * Church *

American Architect and Building News. June 15 1887. No. 599

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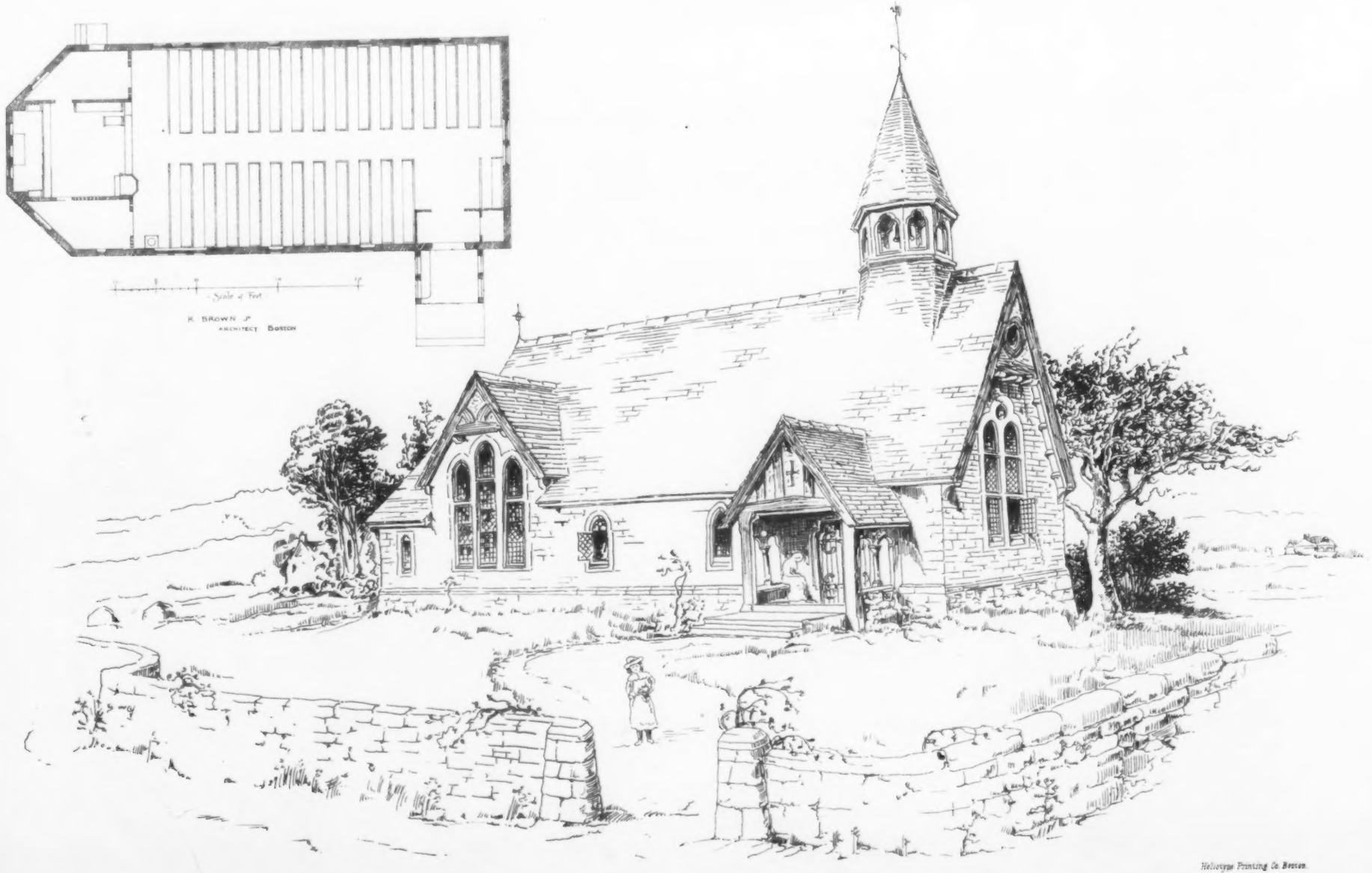

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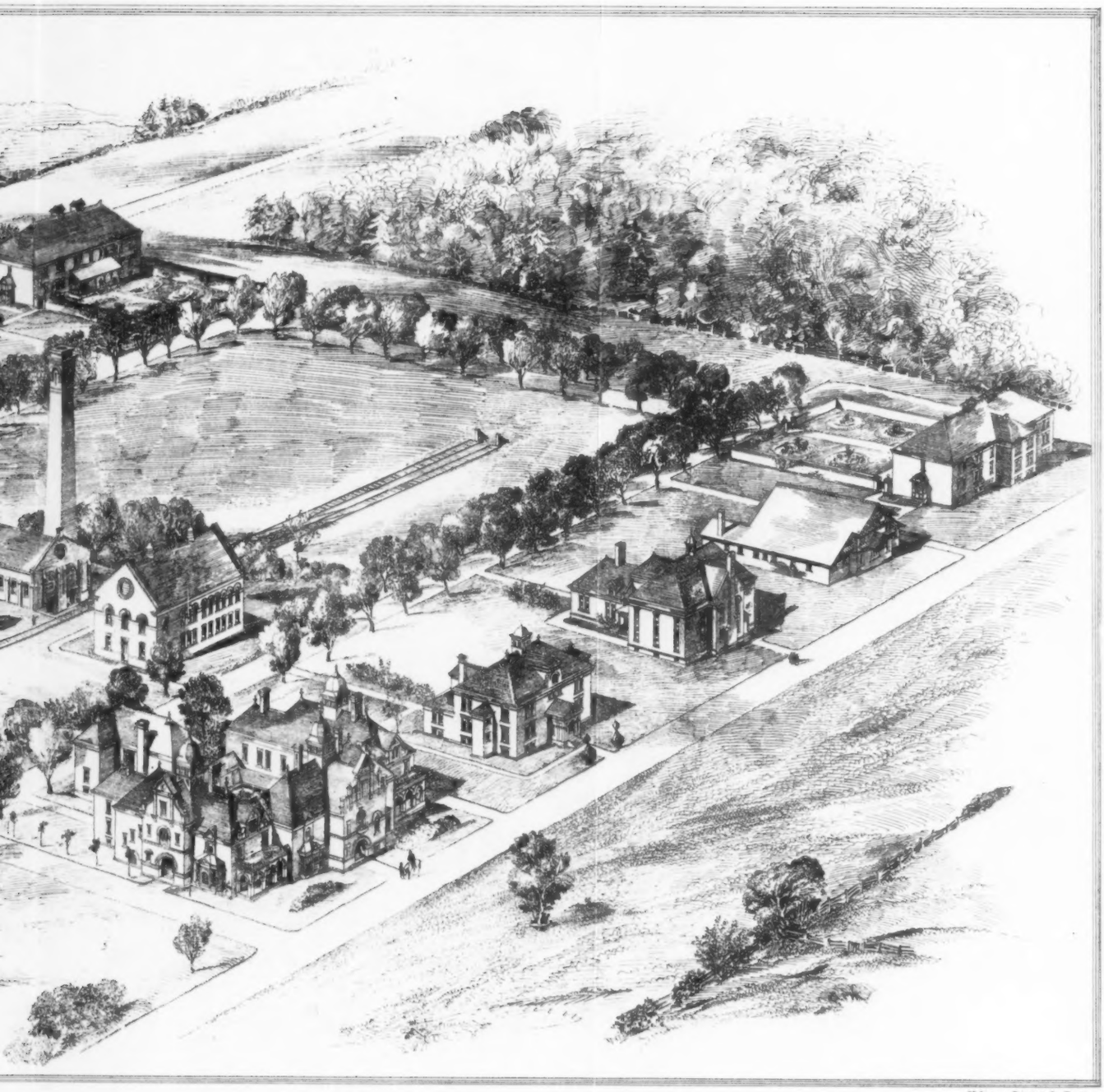

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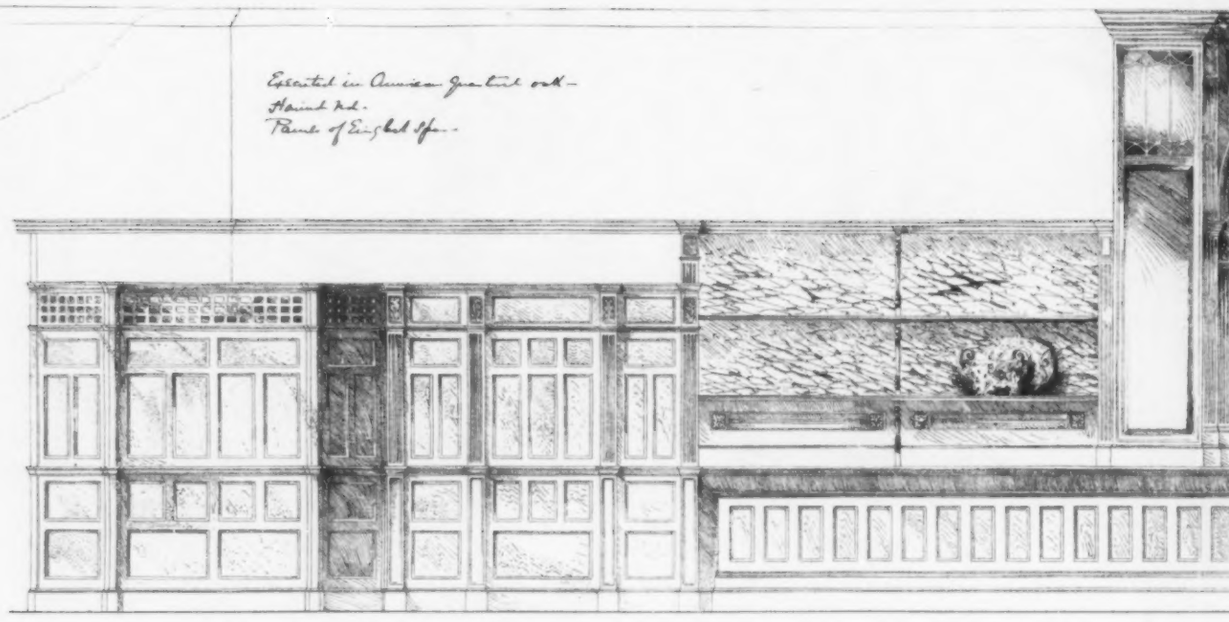
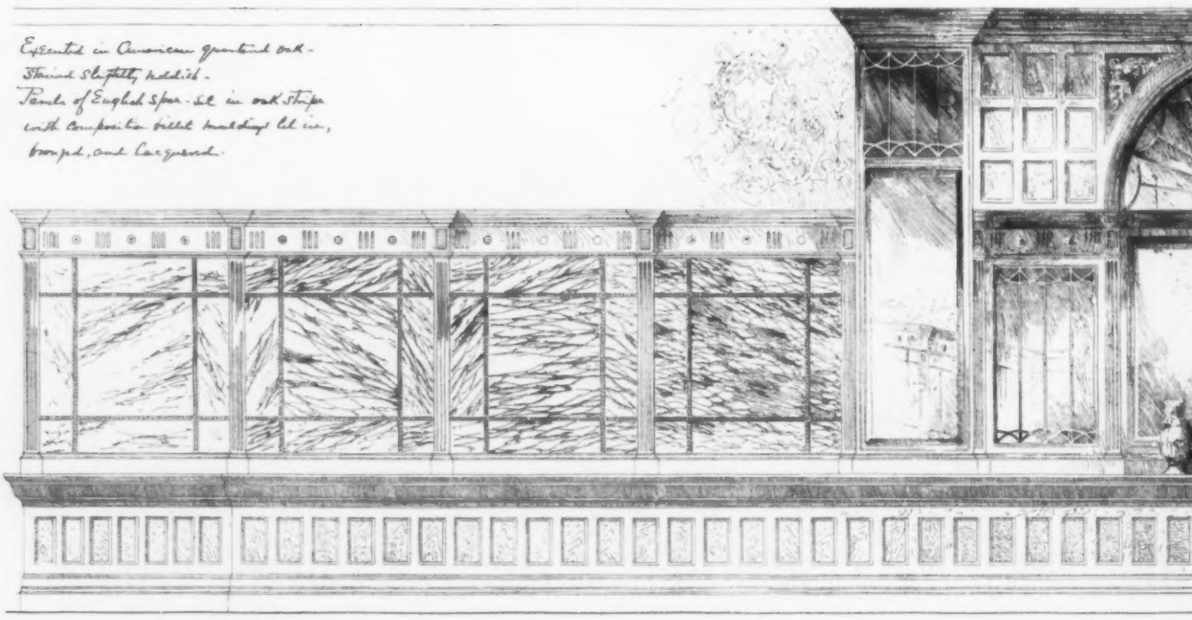
Executed in American quartered oak -
Stained Red -
Panels of English Spar -



·ICE · BOX·

Executed in American quartered oak -
Stained Sheffield, reddish -
Panels of English Spar - All in oak Strips
with Composite Bevel moldings All in,
Stamped, and Lacquered.



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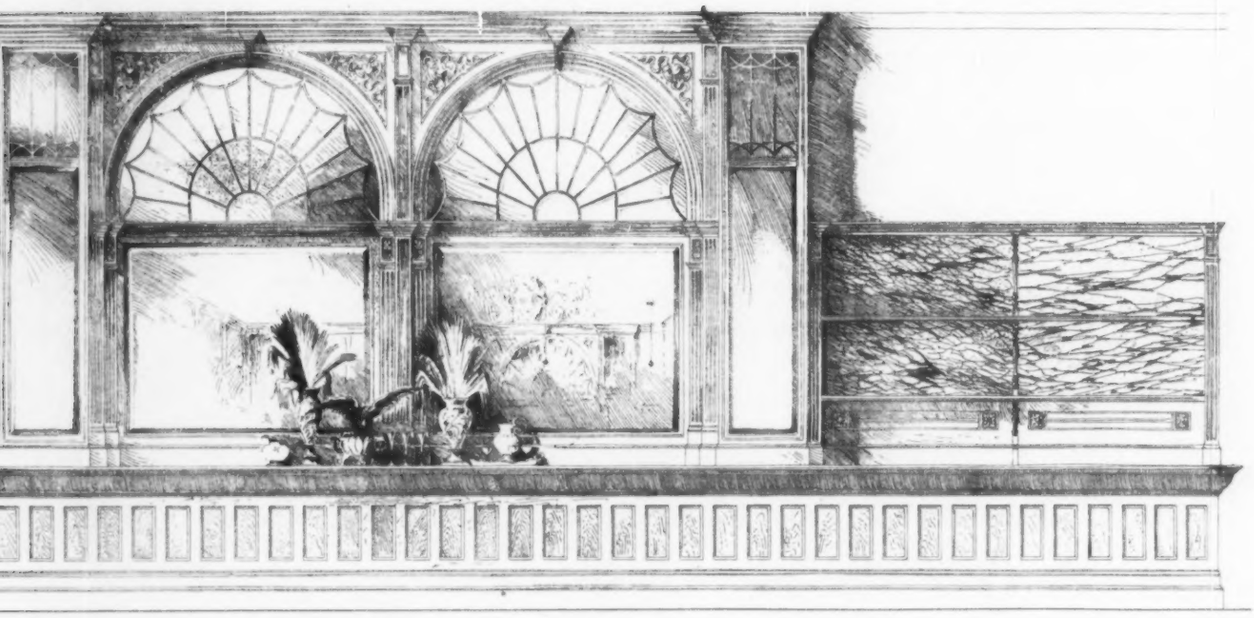

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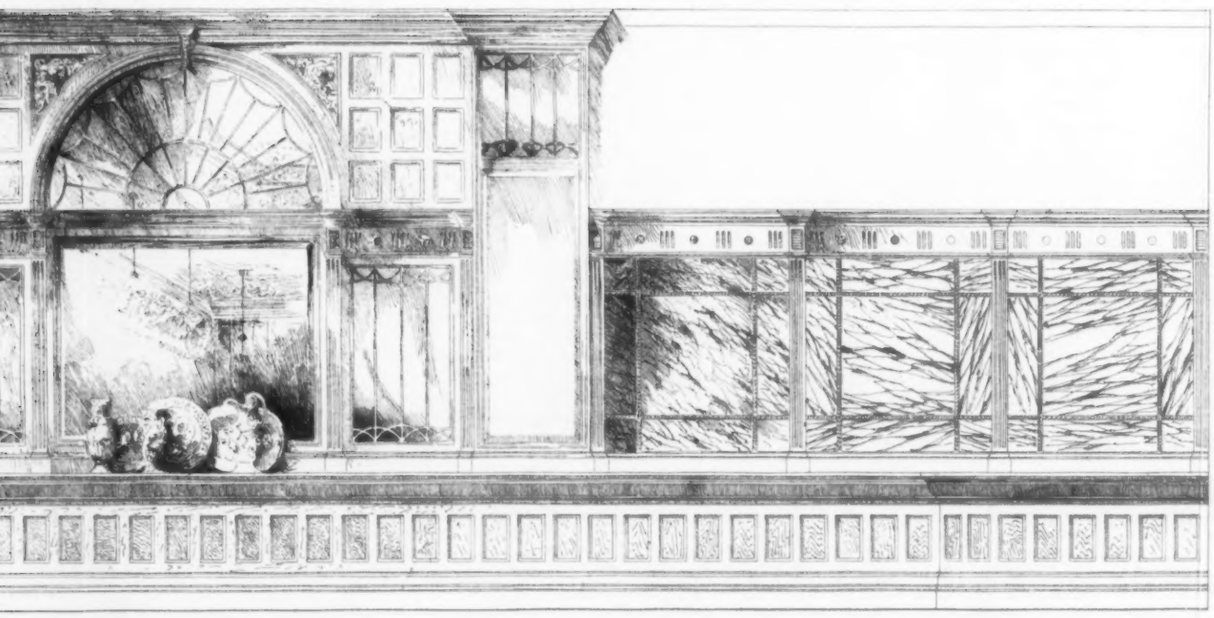

·DELMONICO'S·
EW·RESTAURANT· 341·B'WAY·N.Y·
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·JAS·BROWN·LORD·ARCHITECT·
·131·EAST·23d ST·N·Y·

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THE ILLUSTRATIONS

[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

THE ROTCH TRAVELLING-SCHOLARSHIP DRAWINGS. — PLATES LII., LIII., LIV.

[Issued only with the Imperial Edition.]

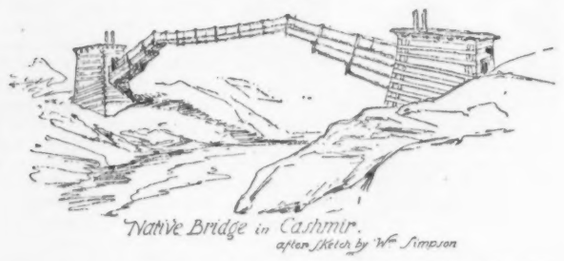
PRELIMINARY SKETCH FOR A SUBURBAN EPISCOPAL CHURCH. MR. ROBERT BROWN, JR., ARCHITECT, BOSTON, MASS.

HOSPITAL FOR THE INSANE, RICHMOND, IND. MR. E. F. KETCHAM, ARCHITECT, INDIANAPOLIS, IND.

INTERIOR FITTINGS OF DELMONICO'S RESTAURANT, NEW YORK, N. Y. MR. J. B. LORD, ARCHITECT, NEW YORK, N. Y.

A BAY OF THE APSE, AULNAY-DE-SAINTONGE, FRANCE.

A WOMAN'S ARCHÆOLOGICAL WORK IN THE NORTH-WEST.



UMATILLA, OR., May 27.

FROM the blown forelands and grave and dark seas of the Pacific and Puget Sound to this desolate sand-desert, where the Columbia and Umatilla unite their waters, what contrast could be stronger? Bruit of a remarkable collection of archæological treasures drew me hither, and I found on coming that the village, Umatilla, which has now such an antiquarian reputation, itself is a relic. Originally a site of placer mines, afterwards a mart of frontier trade, still later, the mines being exhausted and abandoned, a prominent landing-place of the Columbia-River boats in their more northern voyages, it is now little more than the point of connection of the northern and central railway systems. Apparently, the little cluster of brown buildings which forms the depot constitutes also the village. The trains pass invariably in the deepest hour of the night, so that no tourists see Umatilla, and it is known to travellers generally only by hearsay, and, in these later days, by little of that.

The sea of heaps of wind-blown sand which extends from the depot to the greater river, preventing streets and paths, and almost preventing roads, presents no lure to tourist or emigrant. But to the comer skilled in such things they at once advertise that they were built not by nature, but by man, and the dust of their architects yet speaks from them in a tongue no man can understand. These mounds, with an underground railroad of related formation extending east some three score of miles to the John Day River, where Captain Bendire has made no mean discoveries, and west to the Dalles, present indications of pronounced archæological riches. Over and above them are still scattered the arrow-points and flaky fragments of the stone implements belonging to the race which produced them. Protests are they not of the low and level land against itself, created by the same aspiration which in similar localities produced Babel and the pyramids? For the people that formed them differed certainly in æsthetic endowment and social habit, if not in physique, from any that have succeeded them.

Hither, a score of years ago, came Mr. J. H. Kunsie and his young wife, "to settle and grow up with the country." It is almost as dangerous to transplant a family as a tree, but one can imagine no surprise ruder than the transition from a home of refinement to one in such a locality as this Umatilla at that time. "There was literally nothing here when we came but sand and Indians," said Mrs. Kunsie to me. "I found I could sit and cry my eyes out longing in vain for the old home, or I could address myself to finding out what there might be of good around me."

So the young wife began to translate into action the answer of Thoreau to Lord Cholmondeley and look for her Victoria Regia on those sand-wastes. Such an effort and so prolonged is notable in the catalogue of heroisms which illustrate the earlier history of this new country. Still it is given to few to be free while one is yet young, and to be seconded and supported as Mrs. Kunsie was by her husband in her explorations. She soon discovered that the arid peninsula on which stood their home was fertile in a most extraordinary wealth of antiquities. The very sand about her doorway was printed with the traces of an extinct people, and amid the mussel-shells bleaching on the river's banks were its decorated treasures, for ages awaiting recognition. And here, mainly with her own hands, she has gathered the only representative collection the State of Oregon contains, more extensive than that of the Williamette Valley in Portland, or that of the Puget-Sound shores in Port Townsend. It is worthy of a more direct attention than has ever been accorded to it.

At a first view of the exhibit one is struck by the conventional use of natural objects: the evident materialization of myths, such as horn serpents devouring their tails, the traces of symbolic rock-picture writing, and other still more peculiar evidences of a superior and masterful race. Conspicuous among the finds are the simple implements of amusement (disk-stones and gambling-sticks exquisitely finished) and the articles of adornment, mainly beads of glass and stone. Of the latter, some are of unusual size, being two and one-fourth inches long, and weighing two ounces. Many are polychrome, resembling those discovered in the Mohawk village, Leontogen, destroyed by the French in 1666. These beads were the bequeathed wealth, the dowry of bridehood, perhaps the bravery of the daughters of the town. The ornaments of polished stone are surpassed in variety only by the Catlinite red pipestone ornaments. Weapons of the hunt and battle diversify the collection with their remarkable variety. Here are stone-swords, slate-lances, and spear-heads, and spear-points, and daggers of flint. The spear-heads are most delicately fashioned, even out of material as refractory as quartz. Here, also, are dark-green jade axe-heads highly polished, axes of granite and hornblende, and war-clubs, some exactly resembling those fashioned by the Sandwich Islanders, and others with the peculiar, chiselled, prehistoric ring found among the copper ledges of Lake Superior.

As in all other similar collections, the sacred pipe emphasizes the antiquity of the narcotic habit. The general form of the calumets is more simple (and therefore, presumably, more ancient) than those found in the lower latitudes of America. The bowls are clumsy, and one or two illuminate the collection with an unmistakable effort towards the grotesque and emblematic, for one cannot otherwise readily interpret the artificial exaggerations out of all anatomical proportion here and there attempted. The largest of these pipes is four feet long and weighs half a pound. The smallest is six inches long and weighs six ounces. Some are elaborate, and some are fac-similes of the modern cigar-holder.

But it is in images (or idols) that the ingenuity and hand-sleight of the makers of these things found fullest expression. These have been found in the greatest profusion; some with crossed hands chained, and curled-up limbs, others erect and symmetrical, still others half-human and half-animal, but all, whatever their symbolic shape, hollowed slightly on the topmost part (whether back, or tail, or head, or protuberant ribs) for incense-holding. The outlines of the human face are hardly decipherable in some. There must have been an idol manufactory near the Dalles. Many forms of rude statuary, even including that of the cross, have been found *cached* near there; faces, half-owl, half-human, armadillos, crystal eels, stone bugs, rabbits, frogs with tails, and other charms and fetiches. There are also heads of coyotes and serpents, medicine-tubes, fashioned after the sinuous bodies of the latter. I noticed especially a stone monkey or baboon in sitting posture, five-and-a-half inches high and seven in circumference, weighing seven pounds.

The instruments of surgery, which are of the simplest character, and even the weaving implements, show trace of an effort towards worship in their carving and rude adornment. These and the few cooking-utensils exhumed resemble those lately discovered in Alaska buried with the dead. Evidently they were made where stone was the only mineral material to work with. And the fact that the horn is frequently found decaying suggests great age. The presence of these is like an older legend intruding on a younger. "I found," said Mrs. Kunzie, "that we were living in a great graveyard. Yonder on 'Bead Hill' and within the limit of half-a-dozen city blocks did we gather almost everything except a few valuable relics (that smell of the beaver) from Long Island, twelve miles down the river."

But in arrow-heads the ingenuity of this people is displayed in its greatest versatility. These are of all possible materials — blue and black obsidian, flint, both plain and tinted, hornblende, chert, serpentine, chalcedony, both opaque and carnelian — and every one a shape of elegance. Mrs. Kunzie, who has given to this branch of her collection especial study, has them arranged in distinct orders according to her theory of their value and significance; for the variations are, plainly, not capricious, but proceed from some well-observed law which enforced subtle technical differences, affording a possible classification. One group is leaf-shaped, and these are mostly of the black volcanic glass. Another, of pure lozenge form, grooved and reticulated, exhibits delicate tracery. Still another betrays novel variations of its principle, which is cordate. The rudimentary forms favors the hornstone and other common material. But jasper, the volcanic obsidian, and quartzite are reserved for the more delicate and difficult work. Of none is the finish smooth and fine The material was evidently fashioned by instruments which could chip, but neither grind nor polish. Moreover, a close inspection shows that few are perfect, the material being easily damaged.

Evidently these arrow-heads and spear-points were not merely perforators. Some were set in handles and used as knives. A few of the largest arrow-points and stone-knives are of clearest obsidian and beyond comparison with any similar workmanship I know. They were fabricated here, for the chips are found mingled with the product. These are not met with in those localities of Montana where the arrow-points have been found, which are generally the "surrounds" of buffaloes, where they were stampeded for slaughter. The variety of sagittarial forms especially emphasizes the ingenuity of the people. One could hardly believe that in such obdurate material as chalcedony, flint, chert, obsidian, laminæ of mica, and jade, such delicate and translucent devices could be fabricated. The curving of the barbs particularly is incomparably exquisite and delicate. The distinction between the war and game points is everywhere clearly emphasized. The former are unmistakable, with their sharp beards and serrated harpoon edge. The latter are small, slender, and jewel-like. There is no other trace in the western part of the continent of such points, even could the same beautiful minerals be found.

The calcareous deposits in which these things are found indicate age. Some are tinted with a mineral paint. Fossil fish of a cream-colored stone are occasionally found in the deposits of red porous tufa. Similar relics have been discovered among the continuous elevated apartments of the cliff-dwellers, and scattered among the plume-sticks in the cave-shrines of the Pueblo Zuñis, and the mounds of Pemaquid, Me. The Skuzki, that early relic literature of Russia, mentions similar formations of silicious clay. But most, perhaps, they appear among the elevated graves of wreaths and hoops (so fashioned for the spirits to ascend) of the *Itumbi-bikju* (Tombigbee) of the lower Mississippi. They even appear among the sand-pillars of Central Asia.

I was especially interested in the variety of fish-hooks, bowls, and spoons of mountain-sheep horn, elaborately fashioned bone fibulæ for ornaments and lamps hollowed from the same substance. These constitute a small museum of themselves. The mortars and pestles often pique curiosity to determine their purpose, being imitations of some animal or bird of the wood, never of the sea, in which they contrast with the jasper mortars of maritime West Washington, the pestles of which are generally seal-heads with protuberant elevated eyes. No distinct pottery has been found here. Even after the tremendous wind storms have dug out the mounds, enlarging and deepening the excavations, no pottery is exhumed except from the more modern *caches*. This absence is the more noticeable because the skull-heaps of Clatsop and the country immediately south and west, the native sites of Colorado and California, even as far down as New Mexico and Yucatan, Japan, Corea, and the Aleutians, furnish them in plenty.

The Calendar and Totem posts, and Calendar-stones and grain-stones of this singular collection deserve a word of remark. The grain-stones, prepared for grinding grain, resemble the lava grain-tables of New Mexico. The Calendar-stones have their like nowhere else. The most noticeable is three feet in height, weighs thirty pounds, and has thirty-one notches along one of its lower edges for the days of the month. There is also a stone metate nineteen inches long, thirteen wide, and weighing fifty pounds, and found near it was a murderous-looking knife.

But who were they that knew this mystery? The tribes in their reserves, hereabouts, know nothing about the lost people who did this work. When shown it, they simply shake the head or mutter, "Very old, very." Sometimes, stimulated by reward, the natives spend months elaborating a lance or spear-head, but their clumsy imitation immediately advertises how completely the marvellous head and hand-craft which produced this delicate tracery has been lost. These half-civilized, half-savage camas-diggers care nothing for the mounds which hold these memorials. The cunning of the hand, apparent in the more severe and simple sacrificial and ceremonial apparatus, sewn with sinew and fashioned with seemingly no other implements than edged drills and adzes of fish-bone or knives, needles, and spoons from the antelope, has not survived. Moreover, these Indians have not their forefathers' skill with the bow and arrow and dart. Was wit lost with rancor? Did the secret of the silent death disappear with the Indians' fanfaronnading days? Did it perish when skins and wampum gave place to coin and duffel? The weapon has gone with its chase.

No less enigma is that of the origin of the material itself. For the substances of which these things are made are not found on the banks of the Columbia or Umatilla — no, not within a thousand miles' travel. They are not known to our geology west of the Rocky Mountains. The earlier Southern races produced some similar results from the woven tulares of California. But the people who originated this work were migratory, for every object in the collection, large or small, even every utensil of any bulk, has a hollow band chiselled around its entire surface for convenience in carrying. Frequently these curved fractures are more ingenious than the relic itself, and the lines are so true even in obdurate mineral, such, for instance, as the moss agate, that the conclusion is almost irresistible that the work was done with jewels, but none of these save a few opals and translucent stones have been found in the heaps.

Mr. Eels, an American antiquary, has published the only statement I have seen relating to these remnants. He compares them with those which have been found west of the Canadas. Mr. Kunzie has a theory that the race which produced them, finding, in its wandering, salmon and clams hereabout, *cached* its treasures and continued its journey south, hoping to return, but found the barriers of the Blue Mountains and the Cascades impassable.

This cabinet affords, certainly, the nucleus of a State museum and perhaps bureau of ethnology. The antiquity of some of its treasures antedates history. Whence came, for instance, the Egyptian heads and lava ornaments occasionally exhumed from these refuse heaps? Not even the tribes of the Queen Charlotte Islands, who have accomplished such rare results with slate and silver, have equalled some of this work. Only the Aztec and Toltec people have surpassed it.

Fine and melancholy race, it has long since trodden its pathway to the grave, but the genius of it has materialized in the dusk and shadow of these *tumuli*. From the débris and drift of this old mining camp, from all places where the earth has been pierced, appear these interesting memorials. — *Charles J. Woodbury, in the New York Evening Post.*

A NEW PROCESS OF CASTING METALS UPON COMBUSTIBLE MATERIALS.[1]

St. John's Gate, Clerkenwell, London, Eng.
Original Gate House of the Monastery of St. John of Jerusalem

THE art of making charcoal — if, indeed, so crude a process is worthy of being dignified by the name of an art — dates back to a remote antiquity, and has been practised with but little change for hundreds of years. It is true that some improvements have been recently made, but these relate to the recovery of certain volatile by-products which were formerly lost.

Every one is familiar with the appearance and characteristics of ordinary charcoal, yet I hope to show you this evening that we still have something new to learn about its qualities and the unexpected practical uses to which it may be applied.

We commonly regard charcoal as a brittle, readily combustible substance, but we have before us specimens in which these qualities are conspicuously absent. Here is a piece of carbonized cotton sheeting, which may be rolled or folded over without breaking, and, as you see, when placed in the flame of a Bunsen burner, the fibres may be heated white-hot in the air, and when removed from the flame, the material shows no tendency to consume. Here, again, we have a piece of very fine lace, which has been similarly carbonized, and displays the same qualities of ductility and incombustibility.

These carbonized fabrics may be subjected to much more severe tests with impunity, and, when I tell you that they have been exposed to a bath of molten iron without injury, you will readily admit that they possess some qualities not ordinary associated with charcoal. When removed from the mould in which they were placed after the iron-casting had cooled, not a single fibre was consumed, but, upon the face of the casting there was found a sharp and accurate reproduction of the design, thus forming a die. This die may be used for a variety of purposes, such as embossing leather, stamping paper, sheet-metal, etc., or for producing ornamental surfaces upon such castings.

Some of the carbonized fabrics displayed upon the table are almost as delicate as cob-webs, and one would naturally suppose that when a great body of molten metal is poured into a mould in which they are placed, they would be torn to fragments and float to the surface even though they were unconsumed, yet such is not the case. I have found in practice that the most delicate fabrics may be subjected to this treatment without danger of destruction, and that no special care is needed either in preparing the mould or in pouring the metal.

By the aid of the megascope, the enlarged images of some of these castings, showing the delicate tracery of the patterns, will now be projected upon the screen, and you can all see how perfectly the design is produced.

In these experiments, the mould was made in "green sand" in the ordinary manner, and the fabric laid smoothly upon one face, being cut slightly larger than the mould, in order that it might project over the edge, so that when the moulding-flask was closed, the fabric was held in its proper position. As the molten metal flowed into the mould, it forced the fabric firmly against the sand wall, and when the casting was removed, the carbonized fabric was stripped off from its face without injury. In this way several castings have been made from one carbonized material.

These castings are as sharp as electrotypes, whether made of soft fluid iron or of hard quick-setting metal. This peculiarity is owing to the affinity between molten iron or steel and carbon, the molten metal tends to absorb the carbon as it flows over it, thus causing the

[1] Abstract of remarks, by A. E. Outerbridge, Jr., made at the Stated Meeting of the Franklin Institute, Wednesday, April 20, 1887.

fabric to hug the metal closely. It is somewhat analogous to the effect of pouring mercury over zinc. You know that when mercury is poured upon a board, it runs in a globular form, it does not "wet" the board, so to speak, but when poured upon a plate of clean zinc, it flows like water and wets every portion of the zinc; or, as we say, it amalgamates with the zinc; so when molten iron is poured into an ordinary sand mould, which has been faced with this refractorily-carbonized fabric, it wets every portion of it, tending to absorb the carbon, and doubtless would do so if it remained fluid long enough, but as the metal cools almost immediately, there is no appreciable destruction of the fibres.

The casting which I shall now exhibit represents a very interesting and novel experiment. In this case, the piece of lace, having open meshes a little larger than a pin's head, instead of being laid upon one face of the mould, was suspended in it in such a way as to divide it into two equal parts. Two gates or runners were provided, leading from the "sinking head" to the bottom of the mould, one on each side of the lace partition, the molten iron was poured into the sinking head and flowing equally through both runners, filled the mould to a common level. The lace, which was held in position by having its edges imbedded in the walls of the mould, remained intact. When the casting was cold, it was thrown upon the floor of the foundry and separated into two parts, while the lace fell out uninjured, and the pattern was found to be reproduced upon each face of the casting.

The question naturally arises, why did not the iron run through the holes and join together? The answer may be found in the fact that the thin film of oxide iron or "skin," as it is popularly called, which always forms on the surface of molten iron, was caught in these fine meshes, and thus prevented the molten metal from joining through the holes. I have repeated the experiment a number of times, and find that the meshes must be quite small (not over one-fiftieth of an inch) otherwise the metal will reunite.

I think that this observation explains the cause of many obscure flaws found in castings, sometimes causing them to break when subjected to quite moderate strains. We frequently find little "cold shot," or metallic globules, imbedded in cast-iron, or steel, impairing the strength of the metal, and it has long been asked, "What is the cause of this defect?" The pellicles have been carefully analyzed, under the supposition that they might be alloys of iron and nickel, or some other refractory metal, but the analysis has failed to substantiate this theory. Is it not probable that in the process of casting little drops of molten metal are sometimes splashed out of the stream, which immediately solidify and become coated with a skin of oxide, then falling back into the stream of rapidly cooling metal, they do not remelt, neither do they weld or amalgamate with the mass owing to this protective coating, thus forming dangerous flaws in the casting?

The process of carbonizing the delicate fabrics, leaves, grasses, etc., is as follows: The objects are placed in a cast-iron box, the bottom of which is covered with a layer of powdered charcoal or other form of carbon, then another layer of carbon dust is sprinkled over them, and the box is covered with a close-fitting lid. The box is next heated gradually in an oven, to drive off moisture, and the temperature slowly raised until the escape of blue smoke from under the lid ceases, the heat is then increased until the box becomes white hot, it is kept in this glowing condition for at least two hours; it is then removed from the fire, allowed to cool, and the contents are tested in a gas flame. If they have been thoroughly carbonized, they will not glow when removed from the flame, and the fibres may even be heated white hot before consuming.

Of course, the method employed to carbonize the materials is susceptible of variation, but the scientific principles involved are unchangeable, viz.:

(1) Partial exclusion of air and substitution therefor of a carbon atmosphere.

(2) Slow heating to drive off moisture and volatile elements.

(3) Intense and prolonged heating of the partly charred objects to eliminate remaining foreign elements, and to change the carbon from the combustible form of ordinary charcoal to a highly refractory condition.

BOOKS AND PAPERS

UPON the base or plinth of the famous statue of Zeus at Olympia, Phidias[1] inscribed his name, and the place of his birth. According to the account by Pausanias, the words ran thus: "Phidias, the son of Charmides, an Athenian, made me." We know nothing of Charmides beyond this brief statement; but as it was usual amongst the Greek sculptors to sign themselves "son of ——," as we moderns call ourselves "pupil of ——," it is probable that he, too, was a sculptor. At the same time M. Longpérier has discovered the name upon some vases of the best Greek period; and ventures upon the conjecture that the son may have furnished designs for the father, who was a potter. However this may be, we know that Phidias had a brother named Panainos who was a painter, and whose name figures by the side of those of Micon, and of Dionysios of Colophon, artists, who under Polygnotus did so much towards the development of art in Attica. Phidias himself seems to have made his *début* as a painter, and it may be to his love of color that the antique world owed his chryselephantine statues.

When Phidias commenced his artistic career in 475 B. C., Greek art had already made its exit from the Archaic period. From 500–480 B. C. three schools were flourishing side by side: those of Sicyone, of Ægina, and of Athens. Ancient writers mention the works of Canachos and Aristocles at Sicyone, and of Onatas at Ægina, as of great merit; and we know by the sculptures of the pediment of the Temple of Athene (now in the Glyptoteck at Munich) which, if not by Onatas, were certainly executed during his life, that a high position in art was taken by the artists of Ægina. We see at once that the conventional treatment of the figure by the early sculptors was set aside, and free study from the life adopted. The hair was no longer arranged in the stiff Archaic fashion, which so resembles Assyrian sculpture; and the draperies show the form of the human body beneath them. Routine and convention were abolished, and gave place to Nature. Still, the first of Phidias's masters, was but the last of a long line of Archaic artists — the Athenian Hegias or Hegesias, and a contemporary of Critios and of Nesiotes. Quintillian speaks of his style as hard and resembling Etruscan art. At the same time there must have been some merit in it, as one of his groups, a Castor and Pollux, found its way to Rome. Phidias next studied under Ageladas at Argos, and was fellow-student with Myron and Polycletus. This master's reputation was great beyond his native country, and extended to Magna-Græcia; and it was probably to the school of Argos that Phidias owed his knowledge of working in metal, for at Athens, marble was the material mostly employed by the sculptors.

The first work of Phidias, or rather the first mentioned by ancient writers, was a statue of Athene in ivory and gold made for the town of Pellene; and we are told that underneath the plinth, there was an arrangement for emitting a damp vapor, in order to prevent the ivory from cracking.

About the year 459 B. C. may be placed the bronze *ex-voto* statue of Athene, which commemorated the battle of Marathon; and the Athene Areia for a temple at Platea, which was made of gilded wood with marble head, hands and feet.

It was during the last years of the government of Cimon that Phidias became famous by his colossal statue in bronze, called by Demosthenes Athene Promachos; and which, placed on the Acropolis behind the Propylæa, seemed to be guarding the sacred hill. According to Pausanias, the statue was so large that she was seen miles away at sea, and formed a sort of land-mark. On an Athenian coin, the goddess is one-third higher than the Parthenon; but Michaelis gives the height as only nine metres. Still it is quite possible, that being only of those dimensions, the statue may have struck terror into the souls of Alaric's Gothic followers. In the plates given by M. Collignon from Athenian coins, one sees no beauty, and no majesty — simply rude designs such as a child would draw; indeed, one of them is rather suggestive of the Royal Academy works as illustrated by Mr. Punch. The Parthenon is at the top of the rock against which is placed a primitive kind of ladder; and standing in a dramatically aggressive attitude is the statue of Athene, head and shoulders higher than the temple.

The career of Phidias proves two facts which were as patent in ancient Greece as in the modern world, viz.: that artists require encouragement from those in authority; and that a statesman shows his wisdom by surrounding himself with men of talent. Phidias was as necessary to the glory of Pericles, as Pericles was to the fame of Phidias; and thus we find the two working together to embellish their native city. Not that Athens alone gained by the artistic energy of Pericles; for although she was "gilt and decked out like a coquettish woman covered with precious stones," other cities of Greece shared in the rebuilding which was the result of the revival of artistic activity in Attica.

It is probable that, being the "friend of Pericles," Phidias was an artist of culture; and it was natural that when the Acropolis was to be beautified he should be the sculptor chosen to decorate the Parthenon. The architects were Ictinus, Callicrates, and Mnesicles, and besides these collaborators, Phidias was assisted by his pupils Alcamenes, Agoracritos, and Colotes. Of course added to these, was a whole army of masons, of workers in metal and in ivory, and of wood-carvers. Plutarch speaks of carpenters, modellers, blacksmiths, masons, painters, marquetry artists, chasers of gold, and workers in ivory. So rapidly were the works carried on, that the temple became the astonishment of Greece. But evil tongues began to wag, and the enemies of the statesman did not spare his friend the artist. The comic poets composed epigrams, the aristocrats cried out against the enormous expense, and scandal made the most of the visits of the elegant feminine world to the rising building; but all the time the sculptor was at work at his grand colossal statue of the divine Athene. In the year 438 B. C., the solemn consecration took place, and the noble protectress of the city became one of the wonders of the ancient world.

The statue was a mass of gold laid on in plates in such a manner that they could be removed, if necessary; indeed, the idea of Pericles seems to have been to make it a sort of State reserve fund. Lucian gives an account of the manner of building up these huge statues: the interior was a mass of iron bars and woodwork, and the ivory

[1] "*Les Artistes Célèbres: Phidias*," par Maxime Collignon. J. Rouam, Paris.

and gold plates were hammered and screwed on much in the manner of the metal statues of mediæval times. This mode of sculpture accounts for the numerous thefts to which the statue was subjected, and perhaps was the cause of its final destruction. When this occurred is not known, but numerous authors speak of it as in existence in the year 375 of our era. A tradition records its having been taken to Constantinople, but it is far more probable that it became the spoil of some ruthless army, and like many later works of art, was melted up to pay for war materials. When one reads of the requisitions made by François I on the treasury of Laon Cathedral (amongst others) for statues in silver, chalices in gold and silver gilt, and reliquaries embellished with precious stones, to be converted into moneys to carry on his miserable campaigns, one is not surprised at the same being done by semi-barbarians.

A number of statues have been found that give some idea of the Parthenon Athene; indeed, they are probably (judging from the descriptions by Pausanias and Pliny) early copies, but none of them can be called beautiful in our acceptation of the word. There is a certain nobility about the pose of the one found near the Varvakeion at Athens, and the helmet is of a grand form, but the face, like that of the Aspasios intaglio at Vienna, is severe rather than beautiful. But the general effect of the statue must have been magnificent: the flesh executed in ivory, the eyes of precious stones, the drapery of gold, the shield of ivory upon a gold ground, the helmet and the serpent of gilt bronze, the base decorated with rich encrustations — all this must have formed a dazzling *ensemble*.

The Parthenon remained almost intact until the year 1687, when a shell fired from the invading Venetian army, exploded in the magazine in its centre, and all but destroyed it. In the fifth century it had been converted into a Byzantine church, dedicated first to the Haghia Sophia and then to Theotokos, the Mother of God; and in 1460 it was transformed into a mosque by the Turks. M. Collignon speaks of Lord Elgin's part in the destruction of the temple as "*devastation*," but when he took possession of the marbles now in the British Museum, the natives were using them up for building purposes! Had not Lord Elgin or some one else picked up the fragments, in all probability all the sculptures which were on the ground would have perished; at the same time every one must lament the taking down of what had not already fallen. Still this can scarcely be spoken of as a "*dépouillement méthodique*," for already in 1674, when Jacques Carrey made drawings of the temple during his voyage with Louis XIV's ambassador, the Marquis de Nointel, the eastern pediment was sadly mutilated.

That the Parthenon statues are the most perfect specimens of the sculptor's art there can be no doubt. Whether we study the draperies of the "Fates," of Demeter, Kora and Iris, or the nude figure of Heracles, the modelling in each case is perfect. Why can no modern artists produce such works? A few Frenchmen are fine sculptors, but what can be said of those of other nations? If the statues of London were served as the French Revolutionists served the fine bronze tombs at St. Denis and other churches, *i. e.*, melted them up into cannon, it would be putting them to a better use than as so-called ornaments to the city.

Like most Greek sculptures, those of Phidias were colored and decorated with gold or bronze accessories. The metopes are unequal in execution, which seems to prove that the great artist did not himself execute all the work — indeed, it would have been impossible for him to do so.

The subject of the frieze which still remains on part of the inner colonnade, is the annual procession of the Panathenea, when the statue was presented with a new *peplos* richly embroidered in yellow and violet. Mr. Collignon's book contains some beautiful photogravures of portions of the sculptures of the pediment, of the frieze and of the metopes.

The varying accounts of the charges against Phidias are well-weighed in this book, and the author justly concludes that, as the gold of the statue of Athene was removable, and therefore capable of being weighed, the charge of embezzlement must, most likely, have referred to the moneys which the sculptor had confided to him for the payment of his assistants. The accusation that the artist profaned his work by placing his own and Pericles's portraits upon the goddess's shield, was one which might be brought against most of the painters of the fifteenth and sixteenth centuries. But whatever the charges, it was probably jealousy and malice which promoted them, and it was equally probable that they were false, otherwise, would the inhabitants of Elis have commissioned him to make their Olympian Zeus of the same costly materials?

This statue must have been of even more splendid effect than the Athene, for not only was it of ivory and gold, but the throne consisted of bas-reliefs and statues in the round, and ornamentation in marble and metals and precious stones. M. Collignon refutes the notion that Phidias's Zeus was modelled upon the Homeric God; as he justly remarks, if this were so, how could Dion Chrysostom speak of the expression being "peaceful and benevolent," and as that of him "who gives life and all other blessings, the father, the saviour and the protector of all mortality." As in later times, and in the presence of a totally-different kind of art, the most miserable of men forget their woes at the sight of this statue "so full of light and of grace." This could not have been said of a work which was moulded upon the Homeric idea of Zeus, the god who made all "Olympia tremble at but the shaking of his locks." Upon a coin in the French National Collection, and upon another in the Blacas collection of the British Museum, this pacific expression is portrayed. The story of the god signifying his approval of the statue by the discharge of a thunderbolt, recalls the mediæval legends of artists being rewarded by the bending of the crucified Saviour's head, or the raising of His sacred hand in benediction of the work. Upon the merits of the work of Phidias the whole world was unanimous. Dion Chrysostom calls it "perfectly beautiful," and Epictetus says, "Go to Olympia and see the work of Phidias, and consider it a misfortune if any of you die in ignorance of this marvellous statue." Quintillian considered it added something to the feeling and culture of religion, so divine was it.

All these witnesses agree in assigning to the work of the old sculptor the first rank; and whether it was suggested by Homer or not, it was the work of a matured mind and hand. But alas! like the Athene, it perished, how or when no one knows. Some authors say Caligula wished to transport it to Rome, but that the god objecting, caused the ship which was destined to take it to founder in a thunder-storm.

Others maintain that it was removed to Byzantium, where it was destroyed in the burning of the palace of Lausos in 475; but is it not more probable that it was destroyed in the burning of the temple which Theodosius II ordered in 408? Phidias was the author of many other statues; the Aphrodite Urania, and another chryselephantine Aphrodite which was placed in an Elian temple; Apollo Parnopios and a Hermes, amongst others. The colossal statues bearing the names of Phidias and Praxiteles on Monte-Cavallo at Rome are of doubtful origin, and as the inscriptions are of the fourth century, it is probable that they were placed on the statues as a testimony of their value in the eyes of the Romans of that period. A curious legend is attached to this fact. In the *Mirabilia Urbis Romæ*, translated in the time of Charles VIII of France, we read of these statues: "*Les chevaulx et hommes nuz dénontent que, au temps de l'empereur Tyberii, furent duex jeunes philosophes, c'est assavoir Praxiteles et Phitias. . . . Et qu'ils sont nuz auprès des chevaulx dénote que les bras haulx et estendus et les doys reployez racontoient les chases advenir, et ainsi, comme ils sont nuz, ainsi la science de ce monde, en leurs entendements estoit nue et ouverte.*"

Phidias, a philosopher! such his reputation in the Rome of the Middle Ages!

Authorities differ as to the time and place of the great sculptor's death, and we leave our readers to follow M. Collignon's text in the matter, preferring to close our review of the book with some of the author's careful and well-reasoned summing up. M. Collignon points out that before the time of Phidias Greek sculpture presented two features, imitation of Nature, and the sentiment of the Ideal. By a conscientious study of the nude the predecessors of Phidias had acquired a thorough knowledge of form and movement, but they were unable to associate this with the ideal without falling into conventionality. To Phidias it was ordained to unite the two, to create a type of perfect beauty, and add to it the most thorough realism. "Phidias est en effet le maître idéaliste par excellence; c'est l'idée qu'exprime Platon lorsqu'il l'appelle un créateur. . . . Mais est-il besoin d'adjouter que cet idéal est toujours celui d'un Grec, d'une race passionnèment éprise de la beauté, et que la réalité ne cesse pas d'en fournir les éléments." "Le style de Phidias," dit M. Ronchaud, "est à la fois idéal est réel. . . . Il est réel par le naturel admirable des poses et des gestes, par la vérité caractéristique des mouvements; il est idéal par le sentiment profond de la dignité et de la beauté de la forme humaine qui respire dans les figures." And comparing Phidias with his contemporaries M. Collignon adds, "En comparant l'art de Phidias à celui de ses contemporaires les plus illustres, Myron et Polyclète, on y découvre à coup sûr des qualités qui sont communes; la perfection du style, le gout de la symétrie. . . . Mais les differences éclatent, si l'on considère quel idéal à poursuivi chacun de ces trois grand maîtres. Myron excelle à rendre l'intensité de la vie; mais il la cherche surtout dans la vérité des attitudes, et cette vie est purement corporelle. . . . Il reste le représentant le plus brillante d'école réaliste. Polyclète est le maître de cette école qui cherche la perfection dans l'harmonie et la justesse des proportions. . . . Il place son idéal dans une sorte de conception géométrique de la forme et dans le fini de l'exécution. . . . Il lui manque toutefois ce que les anciens appelaient le *pondus*, c'est-à-dire la largeur de conception et de style, et l'ampleur magistrale qu'ils reconnaissaient à Phidias. Le grand sculpteur d'Athènes n'est en effet ni un réaliste comme Myron, ni un théoricien comme Polyclète; son caractère original, c'est de faire concourir le mouvement et la forme à l'expression de la pensée. Le Zeus d'Olympie dont la vue provoquait une émotion si forte, est l'œuvre d'un génie méditatif et réfléchi, nourri de la plus haute philosophie qu'ait connue son temps et pour qui l'art n'a son prix que s'il traduit les sentiments les plus intimes et les plus religieux de l'âme. Nul artiste, dans l'antiquité, n'a pénétré aussi avant dans les profondeurs du monde moral; nul autre n'a eu au même degré cette vision de l'au-delà qui se reflète dans son œuvre. C'est la gloire de Phidias de compter parmi les rares esprits qui, dans le domaine de l'art, ont entrevu le divin, et l'ont réalisé dans la mesure des forces humaines." And speaking of the slowness with which, according to Themistius, the great artist worked, our author makes some remarks that a certain school at the present time would do well to lay to heart. "On imagine volontiers ce génie si fécond et si riche répudiant tout ce qui sentirait l'improvisation, se réglant lui-même par un besoin impérieux de perfection, n'ayant rien de cet outrance et de cette fougue qui ne vont jamais sans défaillance.

Aussi Phidias n'a-t-il pas eu de déclin. Sa dernière statue est, de l' aveu de tous, la plus parfaite, et nulle part son génie n'a plus d'ampleur et de sérénité que dans l'œuvre de sa vieillesse."

M. Collignon cites numerous authorities, but we miss the name of W. Watkiss Lloyd in the list. Like the others of the series, the book is well printed, illustrated and attractive. S. BEALE.

SOCIETIES

LOUISIANA STATE ASSOCIATION OF ARCHITECTS.

THE efforts of Mr. Thomas Sully, as a member of the Committee of the Western Association of Architects, charged with organizing State Associations, have resulted in complete success in New Orleans, a Louisiana State Association of Architects having been recently formed, of which Messrs. Thomas Sully, president, William Fitzner, vice-president, W. C. Williams, secretary and treasurer, S. M. Patton, A. Toledano, B. M. Harrod, J. A. Braun and C. A. Leffingwell are the charter members.

The particulars of this organization will be found fully given in the Constitution and By-laws, which are as follows:

CONSTITUTION.

SECTION I. — *Name.* The name of this organization shall be the Louisiana State Association of Architects.

SEC. II. — *Objects.* The objects of the Association are: To unite in fellowship the architects of Louisiana; to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession, and to cultivate and encourage the study of kindred arts.

SEC. III. — *Membership.* This Association shall consist of Fellows and Honorary Members.

SEC. IV. — *Qualifications.* "Any architect practising his profession in the State may become a Fellow of this Association. Honorary Members of this Association may be elected upon the recommendation of the Board of Directors, but all Fellows of the Association shall become Honorary Members when, after three years honorable standing as Fellows, they resign the practice of architecture. Honorary Members shall not be entitled to vote, nor be eligible to office, nor shall they be assessed for dues or initiation."

SEC. V. — *Officers.* The officers of this Association shall be a President, Vice-President, Secretary and Treasurer.

SEC. VI. — *President.* The duty of the President shall be to preside at all meetings of the Association, and in his absence the Vice-President shall preside; and, in absence of both, a fellow shall be elected to the chair.

SEC. VII. — *Secretary.* It shall be the duty of the Secretary to take the minutes of the meetings, and conduct the correspondence of the Association, subject to the Board of Directors.

SEC. VIII. — *Treasurer.* It shall be the duty of the Treasurer to collect all funds, and disburse the same on the order of the Secretary, when countersigned by the President.

SEC. IX. — *Amendments.* This Constitution may be amended by a two-thirds vote of the Fellows present at any regular meeting.

SEC. X. — *Status of Architect.* The status of an architect is hereby defined as follows, to wit: An architect is a professional person, whose sole, ostensible occupation consists in supplying data preliminary to the material construction and completion of buildings; in exercising administrative control over the operations of contractors supplying material and labor incident to the construction and completion of buildings, and in officiating as custodian and arbitrator of contracts, stipulating terms of obligations and fulfilment between proprietor and contractor.

SEC. XI. — *Failure to pay Dues.* Should any member fail for one year to pay his dues, the Board of Directors may, at its discretion, drop his name from the roll. Should charges of misconduct be preferred against any member, it must be done in writing and be signed by the person making such charge, whereupon the Board of Directors at its next meeting must take the matter up, and the said Board may, at its discretion, drop the name from the roll, and the decision of the Board shall be final and absolute. The member against whom the charges are made shall, however, have the right to be heard in his own defense.

Thomas Sully, president; William Fitzner, vice-president; W. C. Williams, secretary and treasurer.

Fellows — S. M. Patton, A. Toledano, B. M. Harrod, J. A. Braun, C. A. Leffingwell.

BY-LAWS.

ARTICLE I. — The meeting of this Association shall be held upon the first Wednesday in May, August, November and February, and at such place as shall be designated by a majority vote of members present at the previous meeting.

ART. II. — The meetings of this Association shall be conducted in accordance with "*Roberts's Rules of Order.*"

ART. III. — The Board of Directors shall consist of five Fellows, including the President, Vice-President and Treasurer, who shall have the care of the property and the management of the welfare of this Association, and shall report at each regular meeting.

ART. IV. — All officers, including Directors, shall be elected annually by a majority ballot-vote at the February meeting of this Association.

ART. V. — All papers, books and other records shall at all times be open to the inspection of the Fellows of this Association.

ART VI. — Candidates for membership as Fellows of this Association shall pay an initiation fee of $5.

ART. VII. — All Fellows of this Association shall pay an annual due of $5.

ART. VIII. — All applicants for membership as Fellows of this Association shall be referred to the Board of Directors, who shall investigate their standing, and if found worthy, recommend them for election at the next meeting.

ART. IX. — All applicants for membership recommended by the Board of Directors, are to be voted upon by ballot, and three ballots cast against any such applicant will be sufficient for his rejection.

ART. X. — A majority of Fellows shall constitute a quorum for the transaction of business.

ART. XI. — The By-laws of this Association can be amended at any meeting by a vote of two-thirds of the Fellows present.

SCHEDULE OF CHARGES AND PROFESSIONAL PRACTICE OF ARCHITECTS, AS USUAL AND PROPER, AND INDORSED BY THE AMERICAN INSTITUTE OF ARCHITECTS AND WESTERN ASSOCIATION OF ARCHITECTS.

For full professional services (including supervision), *five per cent* upon the cost of the work.

The charge for partial service is as follows: Preliminary studies, one per cent; preliminary studies, general drawings, specifications and details, two and one-half per cent; preliminary studies, general drawings, specifications and details, three and one-half per cent.

For work that cost less than $10,000, or for monumental and decorative work, and designs for furniture, a special rate in excess of the above.

For alterations and additions, an additional charge to be made for surveys and measurements.

An additional charge to be made for alterations and additions in contracts and plans, which will be valued in proportion to the additional time and services employed.

Necessary travelling expenses to be paid by the client.

Time spent by the architect in visiting for professional consultation, and in the accompanying travel, whether by day or night, will be charged for, whether or not any commission, either for office-work or supervising work is given.

The architect's payments are successively due as his work is completed, in the order of the above classifications.

Until an actual estimate is received, the charges are based on the proposed cost of the works, and the payments are received as installments of the entire fee, which is based upon the actual cost.

The architect bases his professional charge upon the entire cost, to the owner, of the building when completed, including all the fixtures necessary to render it fit for occupation, and is entitled to extra compensation for furniture or other articles designed or purchased by the architect.

If any material or work used in the construction of the building be already upon the ground, or come into the possession of the owner without expense to him, the value of said material or work is to be added to the sum actually expended upon the building before the architect's commission is computed.

SUPERVISION OF WORKS.

The supervision or superintendence of an architect (as distinguished from the continuous personal superintendence which may be secured by the employment of a clerk-of-the-works, means such inspection by the architect, or his deputy, of a building or other work in process of erection, completion or alteration, as he finds necessary to ascertain whether it is being executed in conformity with his designs and specifications or directions, and to enable him to decide when the successive instalments or payments provided for in the contract or agreement are due or payable. He is to determine in constructive emergencies, to order necessary changes, and to define the true intent and meaning of the drawings and specifications, and he has authority to stop the progress of the work and order its removal when not in accordance with them.

CLERK-OF-THE-WORKS.

On buildings where it is deemed necessary to employ a clerk-of-the-works the remuneration of said clerk is to be paid by the owners, in addition to any commission or fees due the architect. The selection or dismissal of the clerk-of-the-works is to be subject to the approval of the architect.

EXTRA SERVICES.

Consultation fees for professional advice are to be paid in proportion to the importance of the questions involved, at the discretion of the architect.

None of the charges above enumerated cover professional or legal services connected with negotiations for site, disputed party-walls, right of light, measurement of work or services incidental to arrangements consequent upon the failure of contractors during the performance of the work. When such services become necessary, they shall be charged for according to the time and trouble involved.

DRAWINGS AND SPECIFICATIONS.

Drawings and specifications, as instruments of service, are the property of the architect.

CINCINNATI CHAPTER A. I. A.

WHEREAS, The Board of Armory Trustees, of Hamilton County, Ohio, have advertised for architects to submit plans, drawings and specifications for an Armory in the city of Cincinnati, and as the said Armory Trustees have offered no compensation for such services rendered, nor any premium for meritorious designs, nor appointed an expert jury to pass upon the merits of the same, and have, moreover, limited the time for the preparation of such drawings to the short period of twenty-eight days, and whereas the Cincinnati Chapter of Architects has adopted a code governing competition:

Resolved, That a committee of five be appointed to present said code for the consideration of the Board of Armory Trustees, and to request them to modify their conditions, in conformity with the said code, and to give a reasonable amount of time for the preparation of such designs.

And be it further resolved, That a copy of these resolutions be forwarded to the press for publication.

On motion, the following Committee was appointed to present the above resolutions to the above Board of Armory Trustees: Messrs. James W. McLaughlin, Charles Crapsey, H. E. Siter, Gustave Drach, Lucian F. Plympton.

COMMUNICATIONS

A CORRECTION.

ST. PAUL, MINN., June 7, 1887.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

Dear Sirs, — We are this day in receipt of the *Architect* containing the photo-caustic reproduction of a perspective sketch prepared by us

for the proposed new New York Life Insurance Company's building here. In your description of the sketch you apparently labor under the impression that we are the architects of the building. That is erroneous, as the sketch is one that was prepared at the request of Mr. Wm. T. Booth, of the Company, but is not the one that was adopted. We understand that the Company has adopted the design of Messrs. Babb, Cook & Willard, of New York. We do not recall the exact wording of our letter to you, but regret that it should be such as to lead you to suppose that the sketch was adopted.

Very respectfully yours, Hodgson & Stem.

NOTES & CLIPPINGS

Secondary Cause of Death at Theatre-Fires. — Dr. Brouardel testified at the Opéra Comique inquest that he found that the deaths of the victims resulted from three causes, namely: fear stopping the heart's action, asphyxia from carbonic acid, and asphyxia from fumes of oxide of carbon arising from the burning paint on the scenery.

The Discoverer of Natural Gas. — There is one man who is deserving of a place in the history of the discovery of natural gas. Dr. Oesterleni of Findlay knew of the presence of natural gas there fifty years ago. He was passing a stone quarry and detected its presence. He made a little cone of mud over a fissure, and put a bucket over the orifice. In a few minutes he struck a match under the bucket. When the Doctor picked himself up in the adjoining corn-field the bucket was still in the air, sailing north in the direction of Toledo. It was through Dr. Oesterleni's energy, fifty years later, that the first natural-gas company in the town was organized. He had been laughed at and derided for half a century, and even after the flow had been struck in 1884, they say a good many of the people thought Old Nick had a hand in the thing somewhere.— *Pittsburgh Despatch.*

The Keely Motor. —

Oh, the funny man may giggle, but it's coming by and by —
The derided Keely motor I am building on the sly;
Hitch a belt to this invention and a power will then go forth
That will whirl the equinoxes and the axis of the earth;
It will wrench the solar system, twist the orbit of the sun —
Please invest a little money, for it is n't hardly done.
It needs another piston-rod, perhaps another screw —
But the motor will be ready in about a week or two.
It will wield a mighty power which I cannot here rehearse —
But when it gets in action it will shake the universe.
A deep, mysterious power that will reach forth wide and far,
And rattle through the galaxy and shake the polar star.
The distant Pleiades shall feel this motor of renown,
And the northern "Handle Dipper" shall turn over upside down!
But I need a little money, a few thousand — just a few —
And the motor will be ready in about a week or two.

— *New York World.*

A Curiosity of the Spheroidal State of Water. — The spheroidal state of water has long formed a favorite object for experimentation by lecturers. It consists in protecting a liquid from contact with a hot surface, by interposing between the two a layer of gaseous molecules. In glass works the spheroidal state of water is sometimes illustrated on a large scale. In making colored glass, such as ruby glass, in which gold is the base of the coloring agent, it is often necessary to remelt the charge. The pot of melted metal is emptied by ladling, and the melted glass is poured into water. A barrel of water is placed upon the floor near the opening of the pot, and the workman with an iron ladle pours the melted glass into the water. It at once sinks, and, owing to its intense degree of heat, becomes surrounded by an atmosphere, or thin layer of steam. The water does not touch it, and hence is but slightly heated. The surface remains quiet, and the depths of the water glow with a diffused red light. After awhile the glass cools, the water comes in contact with it, and bursts into rapid ebullition. Even this ebullition is less violent than would have been anticipated, owing to the non-conducting power of the glass. As soon as a small thickness becomes cool, it protects the centre of the mass. If a few ladles are emptied into a bucket of water, the effect is far more striking. The red-hot glass can be seen lying in a mass, as large as a cocoanut, quietly at the bottom of the pail. It is most impressive to see the great lump of glowing mass maintaining its full heat under the comparatively cold water. This state of things may last for a minute or more before the water boils.— *Iron.*

Chloride of Palladium Paper for Detecting Gas Leakages.— To search for leakages of gas, Dr. Bunte suggests the use of paper dipped in palladium chloride solution. Such a paper, in fact, changes its color as soon as it is in the presence of a quantity, however small, of gas, coming from leaks imperceptible by the odor, and which produce no effect upon the earth covering the pipes. Dr. Bunte suggests the following method of practically applying the test to street-mains. Above the pipe are excavated, at intervals of two to three metres (six-and-one-half to ten feet), holes thirty to forty centimetres (twelve to sixteen inches) deep, corresponding to the joints and sleeves. In each opening is placed an iron tube twelve to thirteen millimetres (one-half inch) in diameter, within which is a glass tube containing a roll of the test paper. The air from about the main enters the iron tube, and the trace of gas which may be present reveals itself by coloring the paper brown or black, according to its quantity. If, after ten to twenty minutes the paper is still white, we may be certain that at the point tested there is not the smallest escape of gas. Various authorities who have experimented with Bunte's method certify to its efficacy. Beyer, of Mannheim, Eitner, of Heidelberg, Richard, of Carlsruhe, the superintendent of the gas company of Stuttgart, may be noted among these. As a consequence of the trials made at Monaco, it follows that if the use of palladium paper is of incontestable use for testing outdoor conduits, it is of no less value in the case of leaks occurring within houses. Dr. Bunte admits this fact, but adds that in applying this reaction to places closed tightly, certain troubles present themselves. Thus, suspending a piece of paper saturated with palladium chloride to the ceiling of a gas-lighted room, only a small fraction of the air comes in contact with it. Now, to produce the coloration, a certain volume of gas is required. It follows that gas must form a considerable portion of the atmosphere to act upon the paper. Better results would be obtained by aspirating the gas through tubes containing it. Another trouble is that the paper suspended in the air dries and becomes less sensitive. Felker overcomes this trouble by placing under the glass tube a receptacle filled with palladium solution.— *L'Industria.*

Natural Cements. — These are produced from stones containing a large proportion of clay; they are generally found among the hydraulic limestones. Those containing about thirty per cent of clay yield a quick-setting cement, others having a smaller proportion yield a slow-setting one. These cements possess no great strength, and will not stand the weather; consequently, they are mostly used for internal plastering, for which purpose they are specially suited. Roman, Medina, Harwich, Calderwood, and Whitby cements belong to this class. Roman cement is made from stones, or nodules, as they are called, found in the London clay. They are burnt at a low temperature, and yield a very quick-setting cement, which is brown in color. This cement is the oldest in the market, and has been held in great esteem both for internal and external work. It has, however, been to a great extent superseded by Portland cement for outside use, and by others, both natural and artificial, for inside work. It has been much used for stucco, but the stones from which it is produced contain a large proportion of lime, magnesia, iron, and other foreign substance. These are formed into sulphates during the process or calcination, the principal being sulphate of lime and sulphate of magnesia, so that after the cement has been used the sulphates attract moisture and cause the surface of the wall to be damp in wet weather, and in dry weather to be covered with crystals like hoar frost. This is called efflorescence. From the readiness with which it attracts moisture, it should be kept in a perfectly dry place and closely packed till required for use. It should only be mixed in the proportion of one or one-and-a-half of sand to one of cement. This makes it a dear cement to use, as there are others which, though more expensive at first cost, are capable of bearing five or six parts of sand, and therefore produce a greater bulk of mortar at less cost. It is well adapted for repairing work, as it can be painted at once, while Portland cement requires twelve months before it is perfectly dry. The best quality of this cement should not weigh more than seventy-five pounds per bushel, and should set in fifteen minutes. Medina cement is made from the nodules found in Hampshire, the Isle of Wight, and the Isle of Sheppey. It is of a light-brown color, and sets very quickly, almost as soon as it leaves the trowel. It is the best material to use where a quick-setting cement is required. The other kinds of natural cement are very similar to those just described, both in their composition and general charateristics.— *Iron.*

Imaginative Art Renaissance. — It is with the fifteenth century that begins, in Italy as in Flanders (we must think of the carved stone-work, the Persian carpets, the damascened armor, the brocaded dresses of Van Eyck's and Memling's Holy Families), the deliberate habit of putting into pictures as much as possible of the beautiful and luxurious things of this world. The house of the Virgin, originally a very humble affair, or rather, in the authority of the early Giottesques; a no place, nowhere, develops gradually into a very delightful residence in the choicest part of the town; or into a pleasantly-situated villa, like the one described in the "*Decameron*," commanding a fine view. The Virgin's bedchamber, where we are shown it, as, for instance, in Crivelli's picture in the National Gallery, is quite as well appointed in the way of beautiful bedding, carving, etc., as the chamber of the lady of John Arnolfini of Lucca, in Van Eyck's portrait. Outside it, as we learn from Angelico, Cosimo Rosselli, Lippi, Ghirlandajo, indeed, from almost every Florentine painter, stretches a pleasant portico, decorated in the Ionic or Corinthian style, as if by Brunnellesco or Sangallo, with tesselated floor, or Oriental carpet, and usually a carved and gilded desk and praying stool; while the privacy of the whole place is guarded from the noisy street by a high wall, surmounted by vases, overtopped by cypresses, and in whose shelter grows a row of well-kept roses and lilies. Sometimes this house, as I have said, becomes a villa, as is the case, not unfrequently with the Lombards, who love to make the angel appear on the flowery grass against a background of Alpine peaks, such as you see them rising blue and fairy-like from the green rice fields about Pavia. Crivelli, however, though a Milanese, prefers a genteel residence in town, the magnificent Milan of the Galeazzo and Filippo Visconti. He gives us a whole street, where richly-dressed and well-peruked gentlemen look down from the terraces, duly set with flowerpots, of houses ornamented with terra-cotta figures, and medallions like those of the hospital at Milan. In this street the angel of the Annunciation is kneeling, gorgeously got up in silks and brocades, and accompanied by a nice little bishop carrying a miniature town on a tray. The Virgin seems to be receiving a message through the window or the open door. She has a beautiful bed, with a red silk coverlet, some books, and a shelf covered with plates and preserve-jars. This evident appreciation of jam as one of the pleasant things of this world corresponds with the pot of flowers on the window, the bird-cage hanging up; the mother of Christ must have the little tastes and luxuries of a well-to-do burgess's daughter. The cell of St. Jerome, painted some fifty years later by Carpaccio, in the church of the Slavonians, contains not only various convenient and ornamental articles of furniture, but a collection of knick-knacks, among which some antique bronzes are conspicuous.— *Vernon Lee, in the Contemporary Review.*